SOUTHERN AUTOMOTIVE JOURNAL

a W.R.C. SMITH publication

SERVING THE 19 SOUTHERN AND SOUTHWESTERN STATES SINCE 1921

December 1961



The Story on Oil Changes—page 31 . . . Pre-Planning a Shop Is Vital—page 34 . . . Mechanics? We Train Our Own—page 36. . . Servicing Buick Special Door—page 44.

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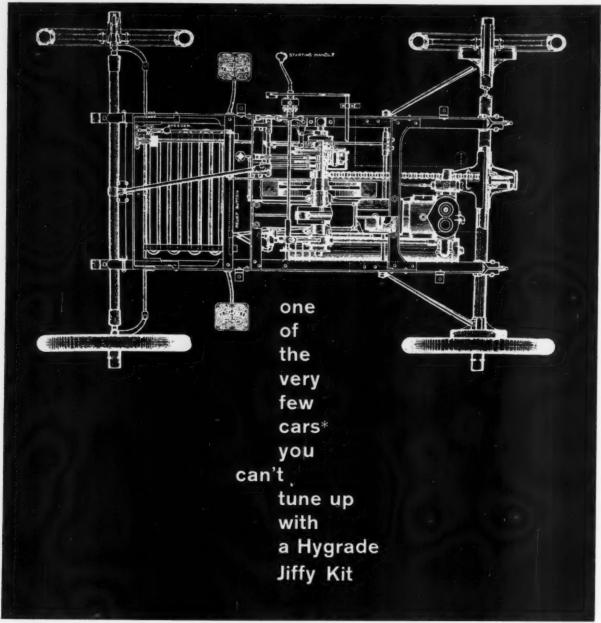
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SOUTHERN AUTOMOTIVE JOURNAL

Covering Automotive Sales and Service

Volume 41

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Serving the 19 Southern and Southwestern States Since 1921

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to consider on how often the oil should be drained. The author takes you inside the engine as he cites the pros and cons.)

(unless, that is, you think it's not important to build-or remodel-your shop to fit the needs of your customers. This is the latest in the popular garage blueprint series.)

(instead of pirating someone else's labor force, and the men thereby know best how to handle the jobs coming into this shop.)

Our Next Goal: \$1,000 a Day from Fleets....37

(which isn't so far-fetched in view of the fact that this Virginian already has acquired 30 commercial-fleet customers.)

(or so says Technical Editor Ed Lowery, who will admit that he's had to handle many a one over his long span of being a service director.)



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Automotive

SPOTLIGHT

December 1961

A pilot project would put more service stations in the heavy repair business. Surveys have revealed how the stations have been biting off a bigger chunk of the repair and service pie throughout the Southland. Now, if a tryout at Buffalo, N.Y., proves out, you may be seeing even more competition for car dealers and garages.

Here's what is happening there: Humble Oil & Refining has opened a consolidated repair center so that all Esso dealers in the Buffalo area can offer a wide range of ''advanced mechanical services which none could offer singly'' (as the announcement put it). Motorists may not order work there directly—only through the company's dealer stations. Profits on each job will go to the dealer. Charges by the center will cover operating costs. Credit cards are being tested for repair charges and another center will be opened elsewhere soon. Said Humble: ''It should mean more business for the dealer. We will benefit if our dealers win new customers and if the project adds to their success as independent businessmen.''

Typing along Automotive Row: Some Georgia garagemen have threatened to handle another brand of spark plugs if they see any more ads by Rich's, Inc., the big Atlanta department store, of a well-known plug at 59 cents apiece. . . . The millionth passenger-car aluminum engine was produced late last month by one of Detroit's seven automotive divisions having aluminum powerplants in their compact cars. . . . Deliveries of safety seat belts by Ford Division to its dealers have jumped from an average of 6,000 a month last year to a current rate of 21,300. . . . Have you noticed how simple it is to switch to the defroster on the 1962 Fairlane? You merely push the heat control bar farther to the right and the air current is directed upward against the windshield, minimizing any fumbling so common where separate buttons are provided. . . . The horsepower trend may be heading upward again. Latest entry is Ford's six-jet, three-carb deal offering 405hp. . . . Death of N. Field Ozburn at Memphis removed a real veteran from the automotive ''aftermarket''. . . . The annual convention of the National Automobile Dealers Association at Atlantic City, N.J., Feb. 3-7 includes a discussion of what, if any, future is ahead for franchised car dealers.

The subject can be more important than appears at first glance. Ranks of the franchise holders have been thinning at the rate of 100 a month. Uncle Sam, meanwhile, has brought action on the West Coast which challenges the franchise system, saying in effect that dealers and manufacturers owe little to the buyer once a car has been purchased. General Motors, whose dealers are initially involved, feels clearly that a warranty should mean something and that price should include some consideration of that future obligation to a car buyer. Other manufacturers are bound to feel similarly. It's another case of bureaucrats rushing in with two little knowledge of a broad picture, although what they say in print may appeal to the unwary public.

And what of the Autolite matter? Ford shouldn't have bought those battery and spark plug facilities from The Electric Autolite Co., says Washington. Will it now say the same thing about Ford's acquisition of Philoo Corp? And, if it is successful on its Autolite contention, will the ''federals'' then shoot at GM's long-time United Motors Service and AC Spark Plug activities?

SSAREE NO

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Automotive

MARKETS

Financiers Predict Climb

A STRONGER automobile market in the 1962-model year is expected by independent sales finance companies, according to some leaders in that industry.

Signs of favorable buying attitudes are to be seen in dealers' ability to sell at a better profit per unit than a year ago, sales finance executives reported at a press conference held recently in New York in connection with the annual convention of the American Finance Conference.

Stuart H. Smith, president of Securities Investment Co., St. Louis, said, "Our company's best guess is that we should see a 15% increase in the sales of automobiles in the next year."

George A. Bigley, executive vice president of Pacific Finance Corp., Los Angeles, reported that a recent firming of used-car prices is another sign of market strength.

Other members of the press panel

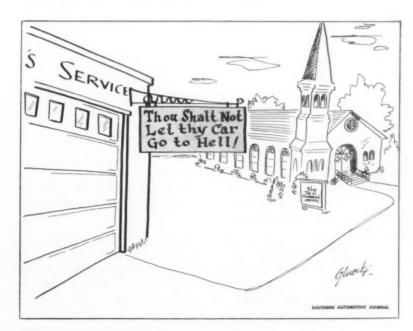
agreed that prospects are good for greater sales, but Vernon Hinkle, president of The Bankers Investment Co., Hutchinson, Kan., said that thusfar sales are not up in his eight-state area.

Robert R. Snodgrass, president of Atlas Finance Co., Atlanta, Ga., said, "Underlying an increased demand for new cars is a big supply of cars older than normal, and more favorable attitudes by consumers as to buying plans."

As a long-range good omen, Snodgrass said:

"In the next ten years, the fastest-growing part of our population will be young adults aged 20 to 29. These people, starting up homes and families, will need to buy lots of 'bigticket' goods—and buy them on time."

American Finance Conference is composed of several hundred finance companies. Some are large and some are quite small.



Texas Ties for Second In Gas Consumption

Texas is expected to consume 3,900,000,000 gallons of gasoline for 1961, tying for second place with New York, according to the 1961 estimate prepared by the Bureau of Public Roads, U. S. Department of Commerce, and based on information received from state agencies and other sources.

California leads the states in expected consumption of motor fuel for highway use with 5,900,000,000 gallons.

Consumption is expected to total 64,900,000,000 gallons for the United States in 1961, a gain of 2.6% over 1960, Federal Highway Administrator Rex M. Whitton announced.

Motor fuel consumed in highway use is expected to total 59,400,000,000 gallons, including 56,700,000,000 gallons of gasoline and 2,700,000,000 gallons of special fuels, such as diesel and butane. Non-highway use of motor fuel is expected to be 5,500,000,000 gallons.

Based on this estimate of highway use of motor fuel and the recently published estimate of 1961 motor vehicle registrations, the annual rate of fuel consumption for 1961 is expected to be 781 gallons per vehicle.

The 2.6% increase anticipated is slightly less than in the previous year. Recent annual increases in motor fuel consumed on the highways were: 1954, 3.8%; 1955, 7.6%; 1956, 5.2%; 1957, 3.3%; 1958, 3.0%; 1959, 5.5%, and 1960, 2.7%.

Standard Buys Mirrors

Standard-Thomson Corp., Waltham, Mass., manufacturer of automotive thermostats and temperature control components, has acquired the automotive mirror business of Supersite Corp., Derby, Conn., Thurman F. Naylor, manager of the former company's automotive division, announced. Although details of the acquisition were not disclosed by officials of either company, it was revealed that it was a cash purchase of Supersite's capital equipment, inventory and rights to the names "Supersite" and "Dandee."





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Next Month's Editorial Menu

Tying in a Shop with Station Operation

What's the best way to tie in a genuine repair shop with a service station? There may be a lot of replies, but a Texan has worked out what has been an ideal arrangement for himself.

As Americans continue flocking to urban areas, with a concurrent demand that they get one-stop attention for their motor vehicles, you may want to study this example of how the customer can get his repairs and his gas, too, at one spot.

An Alabama shop is working now on its second \$100,000-a-year volume. Sales have climbed above \$120,000 a year today. How the volume is being kicked higher by a systematic customer follow-up system may be interesting to those shop operators with the knowhow and idle facilities.

TECHNICAL-WISE

From Technical Editor Ed Lowery's typewriter will pound out two "yarns:"

Engine warm-up, covering the adjustment of various automatic chokes and carburetor fast-idle mechanism to prevent stalling during the warm-up period these cold days.

The painter's problems, with tips on how to prevent and correct the headaches which daily face that important technician, the painter.

As a bonus for other veterans of the service industry, this service director of Lander Motors, Inc., Atlanta, will expound on "Thoughts at 65"—having just become qualified by age to dig back in his memories.



Automotive

EWS BRIEFS



Officers of the Oklahoma Automobile Dealers Association include (1. to r.): W. G. "Bus" Horton of Oklahoma City, president; William H. Cobb of Ponca City, retiring president; Roy Tant of Oklahoma City, secretary-manager; R. W. "Bill" White of Tulsa, vice president, and Jack Clark of Oklahoma City, secretary-treasurer.

Oklahoma Dealers Hear Task Force Report

M EMBERS of the Oklahoma Auto-mobile Dealers Association in their 28th annual convention in Tulsa last month heard a task force report from Sam H. White of Houston, NADA director for South Texas, and heard Harold D. Draper, business management consultant for NADA, compare present conditions in the automobile market with the depression of 1933.

The association elected a vice president and co-vice president for each of the four zones into which the state is divided geographically for association purposes, and directors for each zone. In the following listing the names of the vice president and co-vice president will appear first in that order, followed by names of the new directors.

Northeast zone: Jim Fleming of Prvor and Ray Cox of Tulsa: R. W. White of Tulsa; Bob Parker of Muskogee and Neil Norton of Mi-

Southwest zone: George Caudill of Hobart and Bill Gover of Clinton; C. H. Malone of Apache and Bill Meton, Jr., of Chickasha.

Northwest zone: Bill Thomas of Stillwater and Stanley Stuart of Enid; Wayne Bland of Pawnee; Bill Moore of Ponca City; Wayman

Cornelsen of Fairview; F. W. Foresee of Cushing and Leo Pierson of Woodward.

Central zone: W. G. Phillips of Norman and Emmett Darby of Oklahoma City; Ed Fretwell and Ed Eskridge, both of Oklahoma City.



DEALERS

Jan. 14-17-Annual convention of National Independent Automobile Dealers Association, Stardust Hotel, Las Vegas.

Feb. 3-7--Annual convention of National Automobile Dealers Association, Convention Hall, Atlantic City, N.J.

lareh 18-19—Annual convention of Louisiana Automobile Dealers Asso-Mareh ciation, Roosevelt Hotel, New Or-

April 8-10-Annual convention of Automobile Dealers Association of Ala-

bama, Montgomery.

April 22-24—Annual convention of Automotive Trade Association of Virtue

ginia, Golden Triangle Hotel, Norfolk. May 5-8—Annual convention of South Carolina Automobile Dealers Association, Ocean Forest Hotel, Myrtle Beach.

May 6-8-Annual convention of Tennessee Automotive Association, Andrew Johnson Hotel, Knoxville. May 16-17-Annual convention of Missouri Automobile Dealers Association, Elms Hotel, Excelsior Springs, Mo.

May 20-22--Annual convention of Kentucky Automobile Dealers Association, Phoenix Hotel, Lexington.

June 3-5—Annual convention of Geor-gia Automobile Dealers Association, Wanderer Motel, Jekyll Island. June 8-9—Annual convention of New

Mexico Automotive Dealers Association, Roswell.

GARAGEMEN

Dec. 16-17-Annual convention of Independent Garage Owners of Alabama, Molton Hotel, Birmingham.

Jan. 18-20-Mid-winter meeting of directors of Independent Garage Ownof America, Hotel Tulsa, Tulsa, Okla.

May 19—Annual convention of Inde-pendent Garage Owners of Tennessee, Chattanooga.

June 20-23-Annual convention of Independent Garage Owners of Amer-Battery Park Hotel, Asheville, N. C.

WHOLESALERS

Jan. 29-Feb. 1-Automotive Accessories Manufacturers of America Exposition, McCormick Place, Chicago.

Feb. 26-27-Annual convention of Automotive Service Industry Association, Conrad Hilton Hotel, Chicago. (Membership reception at Hotel Sherman Feb. 25.)

Feb. 28-March 3-International Auto-

motive Service Industries Show, Navy Pier, Chicago. Iarch 24—Annual convention and booth conference of the Automotive March Wholesalers of Oklahoma, Municipal

Wholesalers of Oklahoma City, Okla.

May 4-9—Convention cruise in S.S.

Ariadne from Morehead City, N.C., to
Bermuda and return by North Carolina Automotive Wholesalers Association.

May 11-17-Annual convention and cruise from Jacksonville, Fla., to Nassau and Haiti and return by Automotive Wholesalers Association of Tennessee.

May 20-23-Annual convention of Automotive Engine Rebuilders Association, Sheraton Cadillac Hotel, Detroit.

June 24-26-Annual convention of Automotive Wholesalers Association of Alabama, Grand Hotel, Point Clear, Ala.

Oct. 10-13-Annual convention and booth conference of Automotive Wholesalers of Texas, Corpus Christi. Feb. 13-16, 1963—International Auto-motive Service Industries Show, Philadelphia.

GENERAL

Oct. 28-Nov. 1-Annual convention of Automotive Warehouse Distributors Association, Muehlebach Hotel, Kansas City, Mo.

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Newly-elected officers of the Florida Automobile Dealers Association are (1. to r.): Howard A. Mitchell of Mitchell Motors, Inc., Pensacola, secretary-treasurer; Gordon Thompson of Gordon Thompson Chevrolet, Inc., Jackson-ville, president; Frank S. Edelen of Frank Edelen Buick Co., Miami, immediate past president, and Den Schulstad of Northside Rambler Co., Tampa, who is the first vice president.

"IGO Blue Grass" Forms, Elects Bell President

A LLEN Bell has been elected president of the newly-formed "IGO Blue Grass" unit of Lexington, Ky., the third such unit in the state, according to Ralph H. James of Tulsa, Okla., executive director of the Independent Garage Owners of America.

Other officers are Gilbert Shely, secretary, and D. C. Baker, treasurer. Besides the officers, members comprising the unit are Grover S. Kearns, John W. Cockrell, Robert J. Mook, Cecil Crowe and Keith Bell.

Wilbur Jones of Glasgow and John Glass of Louisville, officers of the other two units, assisted at the Lexington organizational meeting. The state is now eligible to form a state association.

Montgomery Ward Service Expanded by Pure Oil

OFENING of another Montgomery Ward sales agency in a Pure Oil service station—this time in a ew "Service City" service station m Lakeland, Fla.—has been announced by The Pure Oil Co. and Montgomery Ward Co.

The station, situated outside the downtown area of Lakeland, is a super-sized facility with ample parking space. The Montgomery Ward agency occupies a large, air-conditioned enclosed space which was formerly the station's sales roomlounge area. Open 24 hours a day, seven days a week, the station carries Montgomery Ward merchandise for sale on the premises as well as receives catalog orders. All Montgomery Ward services and credit plans are available.

The Florida facility is the fourth such arrangement between the two companies. Earlier this year, Pure Oil and Montgomery Ward announced sales catalog agencies were being established in two stations in Illinois and one at another station in Greensboro, N. C.

Chevrolet Promotes Lund, Others in Field Sales

ROBERT D. Lund, who has been with Chevrolet 15 years, has been named regional manager for Chevrolet at Cincinnati, in charge of the mideastern region, succeeding J. D. Thompson, formerly regional manager at Atlanta, who retired after 38 years with the division.

F. B. Adis, zone manager at Louisville for the past five years, replaces E. A. Snyder, who was named zone manager at Pittsburgh, succeeding Wesley P. Dalton, who retired after 28 years with the company. Adis is a native of New Orleans.

Howard Pike, city manager at Pittsburgh since 1958, succeeds Adis as zone manager at St. Louis. Pike began his career with Chevrolet in 1927 at the warehouse in Atlanta, Ga., subsequently moving to the zone office at Charlotte, N.C., and to the regional office situated in Atlanta.

Motorola, Inc., Offers Electronic Alternator

Designed to last the life of a car, an all-electronic alternator system will be offered by Motorola, Inc., as replacement equipment in U. S. cars, according to C. J. "Red" Gentry, national car radio sales manager for the electronics firm.

Consisting of an alternator, a voltage regulator and a universal installation kit, the system will be marketed as a complete package by Motorola distributors and by distributors and jobbers of automotive equipment. It will be available in 30- or 45-amp units and will fit most 12-volt, negative-ground automobiles built since 1959.

The system includes an all-electronic voltage regulator, uses transistors and diodes throughout and reportedly has an unlimited operating life expectancy with no relays, buzzers or contact points, the company reported.

Robert H. Mohme (shown here) has been named president of Champltems, Inc., St. Louis, succeeding Ernest L. Wylie, who retired after 33 years with the company. Mohme was formerly vice president and general counsel. Gien F. Meyer moved up from vice president to executive vice president.



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This great pair of 100% pure Pennsylvania Motor Oils with Z-7 stays tough full time—keeps moving parts clean and free of excessive wear. Use them—recommend them, for top customer satisfaction.

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Ford's Atlanta District **Leads Others in Sales**

SALES total of 3,602 passenger cars in October placed the Atlanta (Ga.) district of Ford Motor Co. in first place over 35 other Ford sales territories in the nation, according to James M. Moore, Jr., district sales manager.

That month's sales total reflected a 38.5% increase over September, when 2.601 vehicles were sold by



James M. Moore, Jr.

Atlanta district dealers, and compares with 3,444 units sold during October 1960. The previous record for the period was 3,985 cars sold in October 1955.

"This performance, despite effects of the recent nationwide strike at Ford Motor Co.," Moore said, "indicates the tremendous potential presently inherent in the market.'

Texas Group Elects Woodard

J. O. Woodard of Dallas has been elected president of the Texas Independent Automobile Dealers Association. Vice presidents are Cliff Magers of Fort Worth, Ed Fertsch of Lubbock and George Swain of San Antonio. Ray Gillihan of Big Spring is secretary and Lewis Byers of Fort Worth, treasurer.

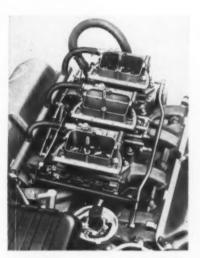
Carolinians Plan Show

Franchised car dealers will stage the Greenville (S. C.) Automobile Dealers Show at the Greenville Memorial Auditorium Jan. 11-13. Thousands are expected to see the new models at this usually wellattended show.

You Can Handicap Would-Be Robbers

A service station attendant was shot to death by a robber last month in Atlanta, Ga. Robberies of automotive establishments are entirely too common. What can you do to minimize them?

Next month SAJ will present an article pointing out steps which can help minimize your risks of body and money. It has been passed upon by the chief of police of Kansas City, Mo., and others in a position to offer the suggestions.



Ford Division has just announced the availability of this most powerful Ford engine ever produced. Capable of delivering 405hp at 5,800rpm, it has a 406-cubic-inch displacement and six-barrel carburetion. It's being offered on the Galaxie and requires special three-inch driveshafts, four-pinion differential, large wheel bearing rear axles and special fuel lines.

Better Year for Dealers Seen by Mississippian

BETTER year financially for new-car dealers was predicted by James E. Fowler of Jackson, Miss., outgoing president of the Mississippi Automobile Dealers Association, at that group's 20th annual convention at Biloxi last month.

"Every economic indicator points to a good market year," Fowler said. He emphasized that the dealers must quit "giving up" profits on

John H. Lander of Atlanta, Ga., first vice president of the National Automobile Dealers Association, told the convention that manufacturers have already done some things that should help them to enjoy better business.

H. L. Roberts of Shelby is the new president of MADA. Vice presidents are M. L. Tutor of New Albany, Sidney Robinson, Jr., of Jackson and R. G. Nester of Laurel. Shannon Copponex of Gulfport was elected secretary-treasurer.

Mrs. Huberta Hawkins of the Martin Dawson Parts Co., Dallas, Texas, is shown here receiving the keys to a 1962 Ford Country Squire from R. E. Simmons, Southwestern regional sales manager of Autolite Division of Ford Motor Co., as first-prize winner in a name contest for an Autolite newsletter for jobbers.

Mrs. Hawkins submitted the name, "Partfolio." Looking on is W. H. Kelly, Dallas district manager for the Autolite Division.





GREETS For the Holiday Season

World Famous LAHER MOUNTAIN MASTER Brake Lining





LAHER MUSTANG TIRES..."The toughest thing in rubber"



LAHER BATTERIES...for all cars, trucks, electric cars!



EVERY LAHER BATTERY IS A SALESMAN!"Sell the Battery that Sells Itself...On Sight"!!

Be it in TRANSIT —
In the WAREHOUSE —
Or on DISPLAY

HIGH WATER LEVEL — of course!

DRY CHARGED . . . — of course!

4-YEAR GUARANTEE*— of course!

Many dealers have doubled-even tripled their battery business with the HOT LAHER line.

Modern, automated sq. ft. will produce quality products for faster

LAHER Spring Plant — exclusive patented, completely automated process is the fastest leaf spring manufacturing process in the world.

LASCO Brake Materials Plant fully automated manufacturing methous producing world famous MOUNTAIN MASTER drake materials — America's Finest Quality.

LAHER Bettery Production Plant
- most modern battery produc-

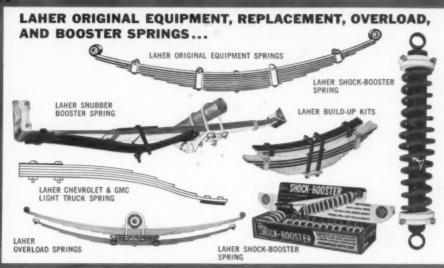


DYNAMIC DIXIE!

and Best Wishes Throughout the New Year

MISSISSIPPI PLANT





plant of over 155,000 America's finest less money—with service!

ing racility in the U.S. to provide the south with fresh EXETER, MUSTANG and LAHER batteries — always tob quality, beautiful design — lowest prices.

LAHER Electric Car Production
Plant—producing the most complete line of electric cars in the
world, including material handling trucks, personnel carriers,
town, club and golf cars, lifttruck equipment—over 30 modals to choose from.

... Call us, write us, come in and say "HELLO!"

NEW ALBANY, MISS.
PHONE: 4783
MEMPHIS, TENN.
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PHONE: JACKSON 3-1344
ST. LOUIS, MO.
3041 OLIVE ST.
PHONE: JEFFERSON 1-2727
FT. WORTH, TEX.
917-919 FLORENCE ST.
PHONE: EDISON 6-0182

LAHER ELECTRIC CARS & TRUCKS FOR INDUSTRY & GOLF



the Heart of Your Tool Kit

YOU CAN'T BUY A BETTER

RATCHET

ASK YOUR JOBBER TO SHOW YOU ONE!

Blowshowns

NEW BRITAIN MACHINE COM

HAND TOOLS



One of these men has good news for you!

The 55 manufacturers representatives in this picture are one of the reasons why Mark IV Auto Air Conditioners are America's favorite custom installed unit.

They're smiling because they've just seen the new 1962 models and can hardly wait to get back to their territories to tell their customers about them.

Do you want to see them too? If so, just fill out the coupon and one of these men or our nearest distributor will call on you within a few days.

Add-on air conditioning is one of your greatest extra profit opportunities . . . and Mark IV is — year after year — America's top selling add-on unit. Why not get aboard?



MARK IV DIVISION

JOHN E. MITCHELL COMPANY

3800 COMMERCE STREET

DALLAS, TEXAS

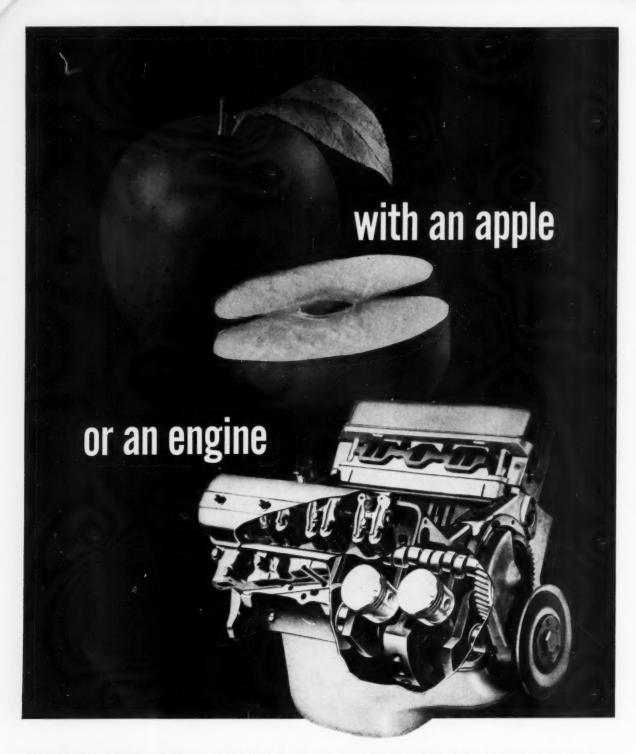
MARK IV DIVISION
JOHN E. MITCHELL CO.
3800 COMMERCE, DALLAS, TEXAS

I'd like to see the new Mark IV models and hear how thay can help me add profits and cut inventories.

Nam

Company_

Address



It's what's Inside that counts! And Rogers Remanufactured Engines not only look good ... they are good. For inside, where it counts, Rogers builds-in quality. From the most thorough

cleaning known in the industry to the final dyamometer testing, every operation is designed to add more miles of engine life, to give lower cost-per-mile to the user. It's your reputation that rides with the engines you install, so install Rogers Remanufactured Engines exclusively.





when you know where to look!

Fuel pumps, even the best of them (and that means AC), are good prospects for replacement by the time they've traveled 30,000 miles. When they aren't replaced, the motorist risks poor engine performance . . . and you lose legitimate profits.

Survey shows that 80 percent of the vehicles on the road have traveled 30,000 miles or more and are prospects for a new fuel pump right now. Four out of five of all vehicles are equipped with AC fuel pumps as original equipment. These figures mean business for you. Make sure your stock of AC Fuel Pumps is

adequate, and start looking for new customers now! It's easy. Any car over two years old is a hot prospect. Point out to motorists that a fuel pump with 30,000 miles behind it has pulsated 45 million times. They'll understand why it's time to protect their future driving with a new AC Fuel Pump.

Don't let this profitable business get away. Look for the sale, then sell AC! Your customers will thank you
... and you'll ring up healthy new profits. You get
ACtion—volume sales ACtion—with AC Fuel Pumps.
AC SPARK PLUG ** THE ELECTRONICS DIVISION OF GENERAL MOTORS





Year after year, Monro-Matics bring in the winners at headline-making races across the nation and around the world. Where speeds reach 180 mph on the straightaways and 100 mph on turns, drivers require the ultimate in car control for safety as well as winning performance. That's why Monro-Matics are the first choice for driving under the toughest conditions imaginable.



AT INDIANAPOLIS A. J. Foyt took top honors in the classic Indianapolis "500" with an average of 139.131 mph. His car, like that of every "500" winner in the past nine years, was equipped with Monro-Matics.



AT MILWAUKEE Rodger Ward set 101 new track records in the big-car "100" riding Monroe Super Load-Leveler stabilizing units on all four wheels ... making up his complete suspension system.

SHOCK ABSORBERS SCORE GRAND SLAM

No other brand of shock absorbers has ever created the enormous demand that continues to build for Monro-Matics[®]. As motorists become more aware of the importance of shocks to driving safety, the preference for Monro-Matics grows month by month.

Helping to spur this demand is one of the most ambitious, hardest-hitting advertising campaigns in the automotive service industry. Month-after-month ads in Life, Post, Sports Illustrated, Holiday, Popular Mechanics, Popular Science, Mechanix Illustrated, Field & Stream, Outdoor Life and Sports Afield. An all-out radio campaign, spearheaded by Bill Stern, on more than 350 stations of the Mutual network. A landslide of promotional aids for dealers.

The fast-moving Monroe line is like money in the bank. Your Monroe jobber can help you start the profits rolling in today. Call him right now!



Dealers report that the Monroe Barrel Demonstrator is boosting Monro-Matic shock absorber and Monroe Super Load-Leveler® stabilizing unit sales by 70% to 400%. Get your yellow and blue barrel today.

MONROE AUTO EQUIPMENT CO. MONROE, MICHIGAN

World's largest maker of ride control products, including SUPER LOAD-LEYELER® stabilizing units • In Canada, Monroe-Acme, Ltd., Toronto, Ontario. In Mexico, Mex-Par, Box 21854, Mexico City



AT DAYTONA BEACH Marvin Panch led the field in the Daytona "500" for latemodel stock cars in his Monro-Matic equipped Pontiac, averaging 149.601 mph. Second place winner Joe Weatherly also rode on Monro-Matics.



AT CHARLOTTE, N. C. In the World "600" stock car race, David Pearson rode to victory on Monro-Matics with an average of 111.633 mph. He also broke the time trial record with an average of 138.3 mph.





HOLMES 650 WRECKER A powerful Heavy Duty Model. Rated capacity 20 tons.

A powerful Heavy Duty Model. Rated capacity 20 tons. Built with two speeds of operation — SLOW for Heavy Trucks and Busses — FAST for Cars and Light Trucks. Power operated with double swinging booms, dual rear end controls, outrigger legs and many other tried, tested and proven HOLMES features. For installation on trucks with a minimum of 22.000 G.V.W.

HOLMES 400 WRECKER

A small, compact, single boom unit for light pick-up and towing. Rated capacity 4 tons. Handles all cars, is FAST and FLEXIBLE. Power operated, has own rapid reverse transmission for rear end control from either side. For installation on most any ½ to 1½ ton truck with a power take-off.

PROVES VALUE of Having Both LARGE and SMALL WRECKERS

★ See us at the NADA SHOW, BOOTHS 700-705



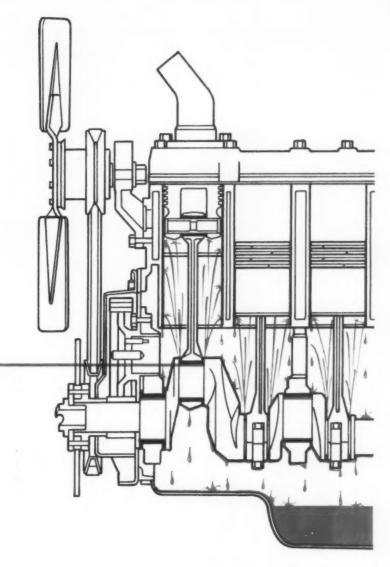
MILLS SHELL SERVICE STATION, Hampton, N. H., shows what can be done with a combination of HOLMES WRECKER Units. This Station has a very lucrative business they attribute to the operation of 3 HOLMES Units; a Heavy Duty 650 Model and TWO of the lighter 400 Models. Use of such equipment enables the Station to render — a complete 100% Road Service, without regard to size or weight of the job. It makes no difference if there are two or three vehicles involved, the Station has on hand for immediate use, wrecker units of the size and capacity to handle any emergency that may occur in the community. The providing of such service is a highly profitable operation. One that pays extra dividends from pick-up and towing service — repairs and service on jobs pulled in. If YOU are NOT providing complete 100% Road Service in your community, then let us show HOW a combination of HOLMES Units CAN earn extra profits for YOU.



HOLMES offers a wide choice of Wrecker Models. Sizes from 3 to 40 ton capacity — ranging in price from \$450.00 up. All on Easy TERMS — up to 6 years to pay. Send Today for full details.

Chattanooga 7. Tennesses

Why precision bearings are vital here



Engine bearings have *two* vital jobs. They provide a low-friction surface for journals to ride on. But equally important, they control the oil throw-off, due to the spinning action of the shaft, that lubricates and cools cylinder walls and other engine parts.

Exact tolerances are needed in engine bearings and shaft diameters to get the kind of precise "clearances" needed to control oil throw-off. Too little clearance—an error of less than .001"—may result in an overheated bearing and early bearing failure due to insufficient lubrication.

Too much oil clearance is equally harmful to proper engine performance. If oil clearance is changed from

just .0015" to .006", the oil throw-off (shown above) increases 25 times. And even the best piston rings can control only about a 5 times normal amount of oil. The excess oil then slips past piston rings into the combustion chamber where it clogs piston rings and builds up combustion chamber deposits.

Federal-Mogul knows, as you probably do, the importance of oil clearances. That's why Fm bearings are manufactured to tolerances as close as ±.000125" —1/16 the thickness of a human hair. Why take a chance on anything less than precision engine bearings? You can be sure of a satisfied customer when you use the best. See your Federal-Mogul jobber.



FEDERAL-MOGUL ENGINE BEARINGS

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC. . DETROIT 13, MICHIGAN



One giant all-metal sign at a fraction of the cost sells 9 of your highest-profit parts and services, takes you out of the sign jungle

Worth \$75 at Retail when you buy 5 pairs of fastest selling Columbus shocks at dealer price.

AT LAST!

HERE'S WHAT YOU GET

full profit on shocks-big savings on sign

No. 988 Assortment Contains	you pay	retail value	your profit
5 Pairs Columbus Shocks	\$77.48	\$116.20	\$38.72
Giant All-Service Sign	9.88	75.00	-9.88
Columbus Service Catalog		1.00	
TOTALS	587.36	\$192.20	\$28.84 net profit plus labor charges



get the BIG DIFFERENCE-get...



Each service panel is backed up with another of your leading parts or services. Change them to suit yourself.



All you need is a screwdriver to turn each of the service signs to merchandise 4 other high-profit services.



Changes are easy; you can reverse the whole set of signs in a matter of minutes-sell 4 other services!

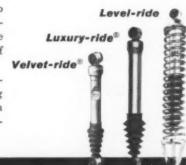
Let's face financial facts: your margin of profit depends increasingly on the extra parts and services business you build. And your customers won't ask for these high-profit jobs if they don't know you offer them.

The best way to tell them is with driveway signs. But before you know it, you can find yourself in a jungle of signs (and a mountain of bills for them) unless you're careful.

Columbus has the answer to both your problems.

When you buy five pairs of these fastest moving shocks, you get the sign for \$9.88. Here's a single all-service sign that allows you to pick and push nine of your most popular and profitable services. Easily removable reversible panels of baked enamel on heavy gauge steel allow you to team up four to eight products and services with high-profit Columbus shocks in an eyearresting big (5 feet high, 3 feet wide) sign. Columbus brings you the entire set for less than you'd probably pay a sign painter to hand-letter just one of

But best of all, it's your chance to set yourself up in business as a Columbus Shock Absorbers Ride Specialist, and cash in on the ever-increasing popularity of Columbus-the first advancement in shock absorber design in more than 20 years. Ask your Columbus jobber for full details on this All-Service Sign Deal No. 988 today.



SHOCK **ABSORBERS**

FULL-TIME COLUM

THE COLUMBUS PARTS CORP., DEPT. 205, 1801 SPIELBUSCH AVE., TOLEDO 1, OHIO

For Top Values in Top Automotive Lines



See Our Representative

HIRSIG-BRANTLEY CO.

AMERICAN NATIONAL BANK BLDG.

JACKSONVILLE 7, FLORIDA



New car or antique, the fastest way to turn out top-notch two-tone or overall paint jobs is with "SCOTCH" Brand Masking Tape. It goes on easier and sticks at a touch. Excellent adhesive qualities prevent paint from creeping under, give a sharp, clean separation every time. And you can depend on "SCOTCH" Brand Masking Tape to strip off clean and leave no jagged edge or messy adhesive residue. Order a

stock now from your 3M supplier for better painting results.

3M AUTOMOTIVE PRODUCTS GIVE THE RIGHT START TO A PERFECT FINISH.

"SCOTCH" IS A REGISTERED TRADEMARK OF 3M CO., ST. PAUL 6, MINN.

MINNESOTA MINING AND MANUFACTURING COMPANY
... WHERE RESEARCH IS THE KEY TO TOMORROW







UNITED DELCO? WHAT'S IN IT FOR ME?

simply say Delco

AND TAKE THE GUESSWORK OUT OF THE TUNE-UP
AND LIGHT-REPAIR BUSINESS!

Simply say Delco for training that serves you three ways: (1) Free Service Training for you and your employees, through your United Delco supplier. Study in a nearby GM Training Center with fully equipped classrooms . . . the kind of training you need to perform top-notch service. (2) Special courses in Tune-Up are available to you from an entire fleet of United Delco Traveling Training Units. These units and a factory instructor roll right into your home area. (3) Periodically you get the free United Delco booklet "Service Information for Engineered Performance" with valuable service tips . . . specification changes . . . detailed information on how to perform service operations. And training is only one way you benefit when you simply say Delco! There's much more!

■ EASY STOCKING OF PARTS in United Delco cabinets

that exactly fit your needs . . . shelves and drawers are organized and clearly marked for efficient storage.

■ DELCO INVENTORY CONTROL CARDS for your cabinet are checked periodically by your United Delco supplier to help cut inventory problems.

■ DELCO CATALOG INFORMATION . . . all the latest application information to help you do a better job.

■ UNITED DELCO ADVERTISING . . . hard-hitting sales boosters that back you up with network TV, radio, magazines, outdoor boards . . . all reminding car owners in your area of the quality service you offer and the broad coverage lines you handle.

■ UNITED DELCO LINES . . . famous products of many General Motors Divisions, distributed through United Delco: Delco Remy Electrical System Parts • Delco Batteries • Delco Rochester Carburetors, Repair Kits and



Chemicals • Delco Packard Wire and Cable • Delco Products Shock Absorbers • Delco Harrison Thermostats • Delco Hyatt Bearings • Delco New Departure Bearings • Delco Guide Automotive Lamps and Lamp Parts • Delco Moraine Brake Fluid and Brake Parts • Delco Appliance Windshield Wiper Systems, Heater, Defroster

and Accessory Motors • Delco Radio Automotive Radios and Electro-Mechanical Devices • AC Service Parts • Hydra-Matic Transmissions. And this is only the beginning! Call your United Delco supplier today, simply say Delco . . . and get all the details of what's in it for you from **United Delco**.



UNITED MOTORS SERVICE, Division of General Motors

The Complete Line

of Van Norman Automotive Machine Shop Service Equipment

REGRINDERS



Comshaft Regrinder speedily and precisely reconditions worn camshafts. Also regrinds main crankshaft bearings. 52" between centers; 9" maximum diameter. 84" model also available.



Automatic Wet Surface Regrinder for fastest above-the-wheel wet grinding of all heads, blocks and manifolds—with quickest setup time. Capacity 38" long by 14" wide. 60" by 16" model also available.



Heavy-Duty Crankshaft Regrinder. For shafts up to 90° length x 10° stroke x 22° swing. Fast, accurate, vibrationless operation. Nine other models in this series.

For complete information and performance data on this equipment write:

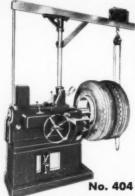
BRAKE DRUM LATHES



"Little Brute" Brake Drum Lathe for passenger car and truck drums with tires mounted up to 500 pounds. Turns and grinds at same time with optional Vapo-Jet Wet Grinding Attachment. N



"Super-Duty" Brake Drum Lathe for car and heavy duty truck drums. Features simultaneous turning and grinding, built-in "scope light", quick action feed and speed selectors.

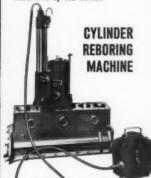


"Speedy Brute" Brake Drum Lathe turns and grinds simultaneously. Flick-O-Matic feed control, Multiple spindle speeds. Exclusive Load Compensator supports all drum and tire assemblies.

ROTARY BROACH



Rotary Broach with new cutter action quickly machines cylinder heads, engine blocks, and other surfaces. Top loading keeps chips out of work. Only machine of its kind!



No. 77754 Perfect-O Boring Ber for ONE CUT, hard sleeve and standard cylinder reboring. Portable With four speeds. Special vacuum system keeps dust and chips from crankcase and oil holes. Three other models available.

THE PRECISION VAN NORMAN MACHINING LINE for

• Cars • Trucks • Buses • Tractors • Diesels • Compressors • Industrial and Marine Engines. With Advanced Design Features in:

Brake Drum Lathes
Camshaft Regrinders
Crankshaft Regrinders
Cylinder Reboring Machines
Rotary Broach
Horizontal Automatic Wet Surface
Regrinders for Heads,
Blocks and Manifolds.

QUALITY IS THE REASON-IT PAYS TO VAN NORMANIZE



VAN NORMAN

Springfield 7, Massachusetts, U.S.A.

A DIVISION OF VAN NORMAN INDUSTRIES, INC.



Change the oil? Protect the oil and it'll protect the engine!

The Story on Oil Changes—

No Sludge in New Oil

Never has the mechanic found himself walking the tightrope in the matter of engine oil recommendation to his customers as he is today. He's always been plagued with a certain amount of argument along the line of:

"Why change my oil? My best friend tells me that oil never wears out."

Usually this little recurring question could be met with the explanation that possibly oil doesn't wear out, but it can be contaminated to death, and this explanation was usually enough to keep the driver from risking damage to his engine by neglecting the oil.

But more emphasis in recent advertising on long periods between oil changes has added new fuel to the proposition that oil need not be changed, and the mechanic is hard put to stand against recommendations for new cars which are transferred by the driver to his older vehicle and wants to "let the oil be."

The longer intervals between oil

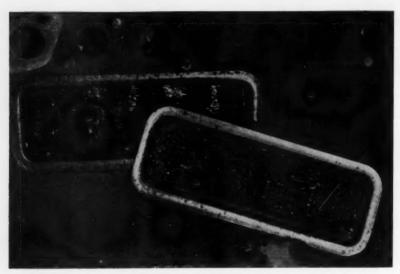
By E. S. HARRIS

changes means little to the mechanic, providing the type of service and the condition of the engine are such that the oil is able to provide all its functions of sealing lubrication, cooling, scavenging and acid neutralizing and impurity suspension. Unfortunately, the odometer doesn't report the condition of the oil in the engine, and if it is to be used as the sole indication of the time for changing the oil, some median service point is necessary. As a matter of fact, the oil change mileage interval recommendations of the American Petroleum Institute, various oil refiners and automotive manufacturers were based on a median point between operation under ideal conditions and operation under the most difficult conditions.

It was found that an engine on blocks in the laboratory could operate almost indefinitely on the same oil with occasional required additions. This provided filtered air, careful tuning and steady operation at ideal temperatures. The opposite condition from this engineer's ideal situation for engine oil was the old-time car salesman's "ideal;" that is, the little old lady who only used her car to run down to the corner grocery store.

The engine in this situation could never attain the ideal operating temperatures, had a too-rich airfuel mixture due to many cold starts, and was definitely "stop and go" throughout its life. Toss in a dusty atmosphere and the engineer had a definite hell on wheels, so far as engine oil was concerned.

Since the average "run" in these United States seems to be some-place under nine miles, it is obvious that most cars operate closer to the little old lady's type of performance than to the ideal laboratory operation. We'll delve into the oil condition under these short-run conditions in the following paragraphs. But there are many vehicles in other types of service that do maintain



"Hot" deposits in the ports and "cold" deposits under the valve cover can tell a story to your customers—maybe expensively late.

conditions under which the oil suffers but little from the raw gasoline, condensed water, acids and other infusions that are part and parcel of short runs. They can and should be given the benefit of the doubt when longer oil change intervals are discussed.

Detergents and dispersants:

We also want to remember that the bit of information that was printed on a brass plate, located near the oil filler of a popular car of the 1920's, is still not far wrong:

"Four quarts of used oil, plus two quarts of new oil = six quarts of used oil."

The detergent and dispersant additives in the engine oil function to keep engine surfaces clean and to prevent sludge of all types, and to keep potential sludge-forming insolubles in suspension, preventing their depositing on engine parts. After they have done their work they should be removed from the engine to be replaced with fresh agents to continue the good house-cleaning work and to dispose of the impurities accumulated and held in suspension.

The detergent additive in engine oil, by chemical reaction, prevents oxidation products from becoming insoluble and then depositing on the internal engine parts. The dispersant additive operates to break down fuel soot and insoluble oil decomposition products into fine particles and hold them suspended in the oil.

These two, of the several common additives used in engine oil, perform valuable services over a reasonable length of time, but do not function indefinitely. Anti-oxidants or oxidation inhibitors:

Over the years the bearing loads have increased in the automotive engine until the old babbitt-type bearings, which had low fatigue strength and were extremely sensitive to wiping, were gradually improved or replaced by use of alloys which were better able to withstand modern operation. Occasionally a magnified inspection of these alloy bearings discloses that particles of one of the metals have disappeared, leaving only particles of the other metal. The missing metal was not the victim of wear or theft but of corrosion.

To prevent corrosion to alloy bearings, another additive—an oxi-

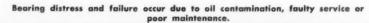
dation inhibitor—is used in the engine oil. It acts to decrease the amount of oxygen taken up by the oil and thus reduces the formation of acidic bodies. This action also prevents sludge and varnish accumulations on engine parts. But the interesting part of its performance is that in its action it tends to oxidize, generally, instead of the oil! Which fact might well suggest that its life was not without limit, and to continue its benefit an occasional oil change is necessary.

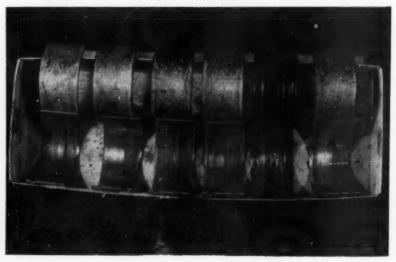
Extreme pressure agents:

Probably the primary function of oil is lubrication, but even in this department the oil needs an assist, and this assist comes in the form of another additive, an extreme pressure agent. There are times, under extreme loads, when the protective oil film breaks down and metal parts come together to produce wear or scuffing and scoring. The extreme pressure additive is insurance against this metallic break-through. By chemical reaction a film is formed on metal surfaces which prevents welding or seizure when the oil film is ruptured.

These three lubricating oil additives are only part of the many compounds added to modern engine oils to provide the protection to the engine. Different refiners make use of different compounds for these various purposes. Each compound is tested to make certain it will do its job while mixed with the other additives and that the compounds are compatible. So, in engine oil we have a nicely balanced, synthesized liquid engine part.

While this important engine part is intact, it does its cooling, lubricat-





ing and sealing job, plus all the engine and self-protection functions supplied by the additives. But when it is broken down to the point it can no longer protect the engine or itself, then it is time to dispose of all the oil and replace it with fresh. If this were to cost a great deal of money, there might be more argument against the change, but any way you look at it, the cost is negligible. Usually the oil level is down a quart or so when a change is due, so adding to old oil costs about 25% of a complete change.

Since it is the mechanic's desire and responsibility to help keep his customers' cars operating economically, it is necessary that he understand something of the chemistry that goes into the formation of engine deposits in the form of sludge or varnish, which can contribute to trouble and expense. With this understanding he can make recommendations and take the necessary action to prevent trouble from this source.

Through use of scientific laboratory equipment the large refiners have analyzed, at considerable cost, samples of engine deposits to determine the possible makeup and source of the contaminants found clinging to the inner surfaces of the engine or cooked on to various parts. Water found in the lubricating oil cannot always be assumed to be the product of condensation in the engine. The analysis may find indications of water-softening compounds, which indicate they have seeped in from the cooling system. Antifreeze found in the oil is presumed to be from this same source. Gasoline usually finds



Foreign particles in the lubricating oil scored this bearing surface.

its way into the lubricant past the piston rings during cold operation when combustion is only partially completed.

Metallic elements found in crankcase oil samples are traced to several sources. Some are from additives, combustion products, wear, corrosion and from outside contamination. Sand particles may be identified as from the vicinity of an overhaul shop. Metallic iron particles, when magnified up to 1,000 times, may be shown as tiny wear particles, filings, turnings or round, hardened steel shot from shotpeening, which, each in its form, discloses its origin. Iron and oxygen are known to combine to form several oxides, according to the particular chemical environment.

As previously pointed out, the deterioration of the oil itself and its additives, plus the deterioration of fuel, through heat, oxidation and the catalytic effect of metal environment, produces contaminants. Soaps of iron, copper, zinc, lead and other metallo-organic material are identified through chemical means and use of a spectrographic analysis similar to that used by law enforcement agencies in developing clues in criminal cases.

The analysis report might comment, as a matter of fact, that the oil from the gasoline engine crankcase indicated that the engine was operated under either low- or high-temperature conditions, as the case may be. This is deduced from the chemical compounds found in the residue. For example, halides indicate low-temperature operation with a rich mixture or frequent choking, while sulfates or oxysulfates are commonly found in deposits from high-temperature operation — very possibly with a lean mixture.

Some of these chemical contaminants may not be harmful to the engine at all, others only when they are left in the engine to increase in quantity or to gather and collect on internal surfaces. On the other hand, who can judge if microscopic solids circulating in the engine are large enough or hard enough to damage a bearing surface?

While the actual analysis of oil and sludge deposits is out of the realm of the repair shop, the information supplied by the analysis provides

(Continued on page 66)

Particles harder than the bearing material become embedded and push warts above the bearing surface.



Pre-Planning a Shop Is Vital

To the garage operator space means volume.

As we watch a car pull out of our driveway to go up the street for a brake adjustment or engine tune-up, we are dismayed to send jobs elsewhere. If only we had another stall, that job would have been ours!

Our opportunity to expand came when the State Roads Commission swept our shop out of its path and we were compelled to seek a new location. Today we are in a fine building with a 14-car capacity—just what we wanted and always hoped for: spaciousness, excellent working conditions, less fatigue with greater production turnover.

After two years of tested experience, there are few changes we would make. However, we learned within our first year of operation that any expansion requires detailed pre-planning.

A tight organization within each department and a rigid bookkeeping control with cost analysis are essential if added space, added equipment, added personnel and added volume are to be profitable. Space and volume are not a simple equa-

By SAM CARROLL

Co-Partner, Carroll Bres. Falls Church, Va.

tion. Unanticipated was our No. 1 problem—skilled labor.

We got through our first year, August '59 to July '60, averaging \$10,000 a month despite setbacks through lack of organization. During the first six months of '61, with bet-

Another Blueprint on Time-Tested Garages

This is another in the latest series of features giving details of buildings which have proven their worth for garage operators. Tearsheets of earlier stories will be forwarded upon request, until the supply is exhausted.

You may want to file away this material against that day when you may be planning a new or revamped building.

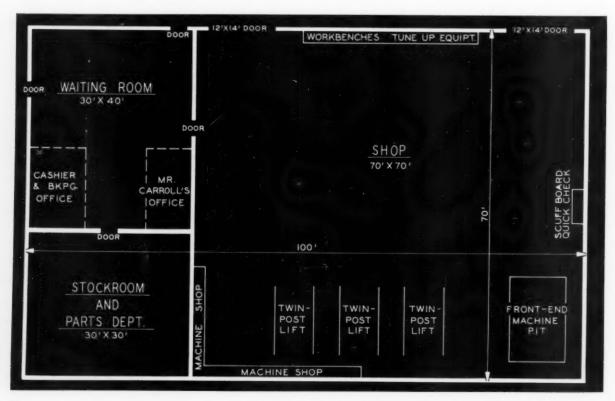
ter controls, volume increased 11%.

At the present time we can see '61 giving us an average \$12,000 a month with the same number of personnel. This rapidly developing area with a new shopping center opening directly across the busy highway from us, our fine corner location with easy accessibility from the main thoroughfare and adjacent bus services promise continued healthy growth for our shop.

Good organization is effecting savings and higher rate of production. Yet we cannot rest on our laurels for even a moment. Constant, methodical analysis and watchfulness of overhead costs are imperative.

We could not have a finer shop. The stockroom is ample, the offices set off, the customer waiting room attractive. This 100' by 70' brick and cinder block building with steel beam roof of one span without supporting interior columns was designed for a continuous flow of car movement.

No car is ever locked in its stall, no car blocks another in its movement around the shop, or in or out. Three twin-post lifts and a front-



end machine face two 12' by 14' front doors.

A machine shop at the rear corner, workbenches and tune-up equipment against a front wall between two doors and a scuffboard for quick checks are located to leave the central area free and spacious for workflow.

Our shop is a state inspection station, its 16' ceiling admitting trucks. A smooth concrete floor easy to keep clean, two gas blowers in the shop and one in the stockroom and eightfoot fluorescent streamline fixtures contribute to time savings and greater efficiency through better working conditions.

On a one-half-acre site, building construction and land preparation cost us \$50,000. Another \$10,000 went into equipment. Though we fell below volume expectations the first year, no one factor contributed to this lag as much as a lack of skilled labor. For example, we had our front-end machine losing money for lack of a skilled mechanic to operate it.

When I met this problem by training a front-end man myself, the front-end machine became a moneymaker and is now one of our most profitable departments. The same thing happened as tune-ups became a more expanded department.

To get an operation off the ground as soon as possible, a thorough investigation of every aspect of the repair business under the newly expanded conditions must be carried out before the first spade of dirt is



Three twin-post lifts at the rear of the shop save time and a mechanic's energy in repairs. In foreground Sam Carroll discusses a job with a customer.

turned.

It is important to know what the capacity of the shop will be. We went from a five-car shop to one of 14 cars without calculating how many skilled mechanics would be needed to handle the new volume.

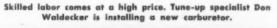
When you remodel, add a building or start at an entirely new location, it is basic to figure overhead right down to the most minute detail. How much volume will be needed to meet the new overhead?

You will have to know how many

personnel in other departments as well as in the shop will be needed to handle an expanding volume. We increased to six full-time mechanics, one inspection man for state inspection lanes, two stockmen, a book-keeper and two in management. Our staff of 13 works under the supervision of my brother and me: he is general manager, I am the service manager.

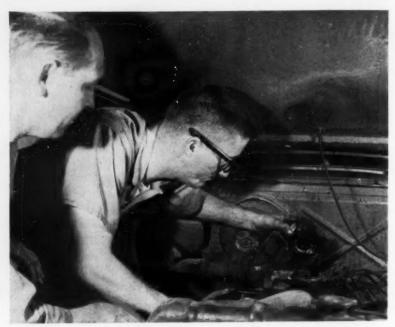
The parts department will require closer study. Control of parts stock (Continued on page 61)

Spaciousness permits the flow of cars in and out and keeps any car from being "locked" in its stall.









In advanced work the apprentice learns to pull a distributor preparatory to reconditioning it. Here Bill Masters oversees apprentice Jim Miller.

We Train Our Own

By ALBERT MASTERS

Owner, Reliable Super Service, Washington, D. C.

THERE was a time when the trades could draw on a labor pool of young people, abundant in numbers and full of zest to learn. The tempo was slower-paced and a young automobile repair apprentice, grateful for the opportunity, willingly worked conscientiously as he looked ahead to higher earnings through hard-won skill.

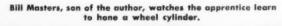
That time is past, and the small independent automobile repair shop is sorely pressed for sources of young labor with the attitude and point of view that disappeared with the times.

Youth has become impatient with small earnings and drudgery during the learning period. A fast-paced tempo has made him restless and impatient to get into higher earnings at once. Many have obligated themselves to families through early marriage. Many who formerly would have been committed to the trades by choice or family background are today drawn into schools of higher learning.

More than any other automobile repair operation, the small independent garage has felt the pinch. It is most difficult for us to get skilled labor.

The dealerships with their largevolume, single-factory products and fringe benefits are in a better position to attract skilled mechanics and pay for apprenticeship training programs. The small volume of the independent garage cannot absorb the costs of training green youngsters (Continued on page 62)

Apprentice Miller cleans carbon from valves before valves are subsequently refaced.







Our Next Goal: \$1,000 a Day from Fleets

By VINNIE MULLIN

President, Vinnie Mullin Motor City, Inc., Arlington, Va.

W E ARE currently shooting for a repair volume of \$1,000 a day. That's our ultimate objective. We've 30 commercial fleets on our books, each fleet comprising from five to 25 vehicles.

About two years ago when we leased this big building—a former independent repair shop with an 18-vehicle capacity—we were aware that without a gas island out front, we would have a hard time drawing the traffic necessary to build a repair volume exceeding overhead of an operation this size. So we solicited commercial fleet accounts.

That first month parts and labor volume came to \$3,000. Running expense was \$4,500. However, by August '61 parts and labor volume had risen to \$14,000, thanks to the steady and varied volume that commercial vehicles brought. Now comprising 70% of our gross, the commercial fleet helped get our operation off the ground those first early months of '59.

Commercial fleets offered a lucrative market and a ready one in this area because most dealers do not have buildings large enough to handle trucks and tractor trailers. To acquire commercial fleet accounts we had to offer repair services that competition was not giving. Our plan was day-and-night repairs so that no truck would be tied up during a workday.

Repairing it in off-hours when it would not normally be in use saved the owner a very minimum of \$35 a day. Furthermore, our plan had another attractive feature: a preventive maintenance basis with regular inspections and authorization on routine repairs except for costly motor or transmission overhauls. Competition worked on a breakdown basis, that is, repairs were carried out only after a vehicle had broken down on the road.

About 70% of our commercial accounts accepted the preventive maintenance plan whereby monthly, every second month or every third month we lubricate, change oil,

check the running condition of the vehicle, inspect tires, front-end parts, under-carriage parts and electrical system.

We determine by our record and inspection the routine repairs like brake reline, replacing front-end parts, motor steam-cleaning and tune-ups that are needed. Coordi-

Moreover, it must be equipped with lifts and floor jacks to raise 20 tons and have modern tuning equipment, brake lathes, frame-straightening machine, automatic transmission jacks of the floor and stand type. To get set up properly our operation called for a \$35,000 investment in equipment.

Records are very important and their accuracy basic to the smooth functioning and good management of an operation catering to commercial fleets. We maintain a ledger account on each individual piece of equipment under a six-digit number of its own, and here we keep a record of preventive maintenance services.

We also have a card file where each piece of equipment under its own number has a card of its own, and these are grouped under the fleet account. This file card presents dates, mileages, repairs done on the

Interested in Fleet Servicing? Here's How One Went about It

nating with the twice-yearly inspections of the state of Virginia, we pack front wheel bearings, steam clean the motor and tune the motor.

The prerequisites for growth in an operation catering to commercial accounts is a building with door clearances of at least 15' and a ceiling at least 18' high. The building has to be large enough to admit and handle trucks and tractor-trailers so that work can be performed inside when the weather is bad in our section.

vehicle, amounts charged and paid. On this card record we have all transactions that have taken place.

This is our reference if any question arises as to what was done on an individual vehicle and when.

An alphabetical file under the customer's name with duplicate repair orders is also maintained as a reference record. Some accounts are billed daily, some weekly and others monthly on a prearranged agreement. Repair orders are sent com-

A tractor-trailer gets an inspection and lubrication at Vinnie Mullin's.





A Saturday morning and night shift daily (when commercial vehicles would regularly be off the streets) help maintain the shop volume at a maximum.

mercial accounts on each job with the billing.

As long as an account remains active, it is kept on file. When active accounts become bulky with 12 months of paperwork, they are removed to another file.

We contract crane service on all emergency road calls. The driver whose truck or trailer has broken down on the road summons a commercial crane service and this call is charged to the customer's account. For us this is a more practical procedure than if we had had to invest \$30,000 in two regular-duty and one heavy-duty cranes and go out 40 or 50 miles to bring a truck in. On minor repairs needed on the road a driver calls on the services of a nearby garage, and either pays on the spot or has the garage bill us.

Commercial fleet accounts offer a wider scope of repairs without discussion and salesmanship. Contact at the account is usually with a supervisor or individual who knows his fleet of vehicles, automotive repair and is capable of checking repairs. Confidence is placed in us and no written contract is required. There is a better meeting of minds on the need for routine repairs. A \$600 motor job may entail some discussion before we are given a green light.

Commercial fleet repair volume is

more profitable than that derived from passenger cars because it is easier to control flow of work and thus lower labor costs. You know when vehicles are coming in and can have your full mechanical staff on hand. On the other hand, on days when no vehicles are coming in, you save labor costs by reducing your mechanical force.

There are no promotional costs in commercial vehicle accounts. I personally call on prospects, introduce myself, describe our preventive maintenance approach, our policy of night repairs to keep vehicles moving, invite prospects to visit our shop, indicating I would appreciate their business.

An index of the quality of our work is the record of one fleet of 60 pieces, an account taken on in August '60, which did not have a single breakdown in the unusually severe winter of snowstorms and sub-freezing temperatures that followed after we had taken on the account.

It is impossible for me to estimate what an average truck brings us in gross volume a year. Depending entirely on the age and condition of the vehicle, its daily handling, etc., some trucks bring \$50 a month, some \$1,000. Fleets average from five to 25 vehicles.

The garage operator wishing to attract commercial fleet accounts must offer services that competition does not. Since it is imperative to keep commercial fleets on the street daily, they require more servicing.

Extending your hours to include night repair service is a great inducement for it means savings of at least \$35 a day to the fleet operator to have no interruption in his daily income.

A master cylinder is being checked at this ever-busy Virginia shop.



We Can Head Off Complaints

By E. M. LOWERY
Technical Editor

A LTHOUGH WE don't like to admit it, most customer complaints are caused by us—not because of the car or the customer.

When a customer registers a complaint, you can safely bet that somewhere someone in the organization failed to do his part.

In the following paragraphs we will list some of the most common causes of customer complaints and (we hope) tell how most of them could have been avoided.

Let's start with the new car.

Many new cars cost more today than a nice six- or seven-room home cost just a few years ago. And the new-car owner is just as proud of his purchase of the car as he was of the home (maybe more so). This being true, when things go wrong, the owner becomes a very unhappy and dissatisfied person. So, a complaint is registered with the service shop.

In far too many cases the complaint is the result of

inadequate new-car predelivery service.

All manufacturers furnish their dealers with forms which list items which should be serviced and adjusted prior to delivery of the vehicle to the purchaser.

Ed Lowery's two-generations-plus experience on the line and as a service manager easily qualifies him to suggest what can be done by dealerships and shops to avoid comebacks.

Failure to make these adjustments is sure to result in service complaints and, in most cases, the final cost of making the adjustments is greater than if they had been made before delivery.

Invariably, when a new-car owner discovers one item that does not operate properly, he will give the vehicle a thorough inspection, and any slight imperfection which would normally go unnoticed suddenly becomes of great importance. So, the service shop is presented with a list—usually several pages long—of the things the owner demands to his or her satisfaction. From there on, until the warranty expires, the vehicle will prove very costly in new-car policy and warranty service.

Next on the list of new-car owner complaints is the misinterpretation of the new-vehicle warranty. It would be much easier and better to explain the provisions set forth in the new-vehicle warranty at the time the car is delivered to the purchaser than at some later time endeaver to explain "why" certain adjustments are considered regular maintenance services which should be performed at the operator's expense.

The 4,000-mile or 90-day warranty was hard enough to explain; just what will be done with the 30,000-mile

or 12 months remains to be seen.

The salesman who realizes the value of satisfied owners (which means repeat sales) will take time out to explain the warranty, along with how this or that accessory operates when the car is delivered. Failure to



do this will result in as many, if not more, complaints than lack of new-vehicle preparation.

Now, let's consider the repair shop, whether it be a dealer's shop or an independently operated garage.

Heading off complaints is very important to either shop. It can make the difference between profit and loss. When a customer has to return to the shop because all of the work was not completed or maybe the work done was not satisfactory, complaints are sure to be registered. It doesn't matter whether the work done was under warranty or under regular maintenance: any visit to the shop causes the customer inconvenience, and having to come back makes him unhappy.

Promising more work than can be done within a specified time is sure to result in complaints. Probably the most important item in avoiding service shop complaints is the hand that holds the wrench—the technician.

It is just common sense that owners will patronize and be satisfied with the shop that does topnotch work. They want service they can depend on—not hit-or-miss repairs which necessitate several return trips to the shop for a "re-do." Careful workmanship means satisfied customers, a busy shop and profits for all.

Most customers want to know about needed services, too. So, why not do them a favor by pointing out possible trouble spots and reminding them of services which if neglected could affect the safety and performance of

their cars

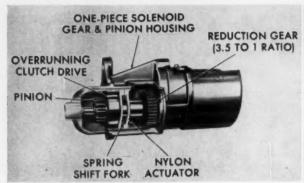
A good service job doesn't end with simply performing the work that is written on the repair order. Often the repair order could be doubled by keeping a watchful eye open to opportunities for additional work.

For example, when the car is driven into the stall or on the lube rack, you can tell when you apply the

brakes if an adjustment or service is needed.

A quick glance at the door jam lube sticker tells if it's time for a lube, oil change or other recommended lubrication services. While under the hood, a glance at the fan belts, battery and wiring may result in additional work and prevent the owner from having to return right away because of the failure of one of these items.

None of these checks requires more than a few sec-(Continued on page 61)



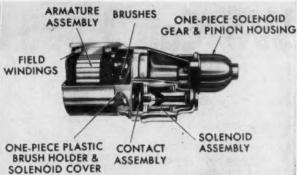


Fig. 1

Fig. 2

How to Service Chrysler's Revamped Cranking Motor

O NE of the new engineering features on the '62 models is the "new style" gear reduction cranking motor being used on all Chrysler Corp. cars except some sport cars equipped with manual transmission.

Gear reduction cranking motors have been with us for many years. However, this motor incorporates certain features that are new (Fig. 1).

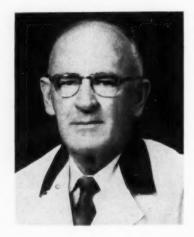
This new design features built-in reduction gearing and positive engagement. The gear reduction provides a 3.5 to 1 ratio between the armature drive pinion and the ring gear. The total ratio between the armature and the ring gear is more than twice the ratio of the former direct drive motor.

This motor weighs only 15 pounds. This is 25% lighter than previous used cranking motors, the main reason for the lighter weight being the one-piece cast aluminum solenoid, gear and pinion housing.

This motor is also simple in construction, more compact and has 15% fewer parts.

A solenoid-shift-type shifting device is used that is housed within the one-piece aluminum housing. The solenoid is energized when the ignition key is turned to the start position. The solenoid then actuates a shifting fork that engages the drive pinion with the ring gear and simultaneously closes the starter switch.

In case of a butt tooth condition between the pinion and ring gear, the tension in the spring-type shiftBy E. M. LOWERY Technical Editor



on this motor are situated at the center of the motor.

The brush holder is of one-piece plastic and is also the cover for the solenoid. The switch contacts are installed in the brush holder.

A relay switch is provided on all cars between the solenoid and the battery.

To prevent dust and moisture from entering the bell housing, a seal is provided for installation between the flange on the pinion housing and the bell housing.

Servicing cranking motors (removed):

Fig. 3



ing fork ensures full engagement the instant the armature starts to turn.

The drive pinion is of the overrunning clutch type. This protects the armature against over speed should the driver fail to release the ignition key from the start position when the engine starts.

All shafts run in oilite self-lubricating bushings and no lubrication is required. Gears are lubricated when assembled, which is sufficient between overhaul periods (Fig. 2).

Positioning of the armature commutator and brushes in relation to previous cranking motors is new. The commutator and brush assembly

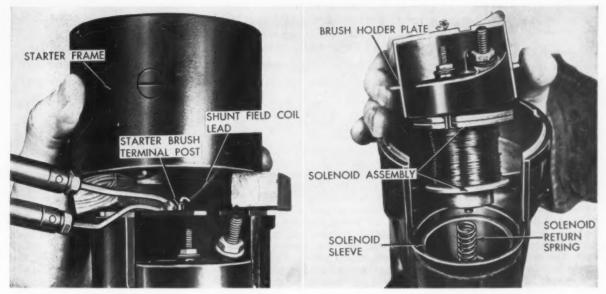


Fig. 4

Fig. 5

The procedures for disassembly and assembly of this motor vary considerably from service procedures on former Chrysler starters. Therefore, it is essential that procedures and sequence of operations be followed as outlined. If they are not followed, damage to the motor may result.

Disassembly:

Since the solenoid, gear and pinion housing is of cast aluminum, it must not be clamped in a vise. The motor may be set in a soft-jaw-equipped vise (not clamped) as a holding fixture (Fig. 3).

The end head assembly is attached to the field frame by two through bolts. Removal of the end head will allow the armature to be lifted from the field frame.

Remove the steel and fiber thrust washers from the armature, noting that there is a fiber washer at the commutator end and a fiber and a steel washer at the opposite end.

Caution: The shunt field coil lead, one set of two brushes and the solenoid coil lead are soldered to a contact terminal post that is attached to the plastic brush holder plate. The remaining set of two brushes is attached to the series field coil by a screw. Do not attempt to remove the field frame until the brush and coil leads are disconnected as follows:

Carefully lift field assembly up far enough to place two one-inch thick wooden blocks between the field frame and the brush plate (180° apart) (Fig. 4).

Remove the series field to brush attaching screw.

Unsolder and remove the shunt

coil lead from the switch contact and brush terminal post. Then lift the field frame assembly from the brush holder plate and solenoid cover.

An insulator is attached to the pinion and gear housing between the brush terminal and the housing. It is attached to the housing with adhesive tape and is easily removed.

The brush holder plate, brushes and switch contact brush terminal post are serviced as an assembly. If the brushes are worn to one half their length or are oil soaked, they require replacement.

To determine whether the spring tension is proper, it can be measured by setting the armature back into place without the field frame. The scale should be positioned as close to the point on the spring where it contacts the brush as practical. The scale reading should be taken just as the spring starts to move from the brush.

Note: The spring scale must be held at a right angle to the armature and a steady direct pull applied.

The brush holder plate and solenoid cover and the solenoid coil can be removed from the pinion and gear housing as an assembly by removing the screw from the brush holder plate and solenoid cover.

Then carefully lift up on the brush holder plate to prevent damage to the solenoid coil and remove assembly from the pinion and gear housing (Fig. 5).

The solenoid can be removed from the brush holder plate by unsoldering the solenoid coil lead from the brush terminal post and removing the nut, steel and nylon washers from the solenoid terminal post, using a 11/32" wrench.

Caution: Before separating the solenoid coil from the brush holder plate and cover, be sure to straighten the solenoid coil lead wire.

After removing the brush holder plate and solenoid cover, inspect the switch contacts. The solenoid disc contact and the battery terminal post switch contact (larger contact) are serviced separately. If the contact disc is slightly burnt, it can be removed from the rod and turned over.

The brush terminal post and switch contact (smaller contact) are not serviced separately, since they are riveted together through the plastic brush holder plate.

Should this terminal be found burnt or loose, the brush holder plate and cover should be replaced as an assembly. A loose terminal would cause a voltage drop. To attempt to tighten it may crack the plastic brush holder plate.

The solenoid contact disc rod (Fig. 6) is a free fit in the solenoid and the disc is also a free fit on the rod.

Three springs are used in the solenoid. The barrel-shaped spring at the contact side of the disc is the contact disc return spring. This spring not only helps break the circuit when cranking is completed but also holds the disc from moving into contact due to vibrations.

The short spring on the solenoid side of the disc that is held in place by a retainer is used to absorb shock and also to hold the disc in alignment across the switch terminal contacts when the switch is closed.

The long spring contained in the

plunger core is the return spring. This spring not only returns the plunger core to the "at rest" position, but since the plunger is connected through the spring shift fork to the pinion, it also assists in disengaging the pinion as well as preventing the pinion from moving into mesh while the engine is running.

These three springs must never be deformed by stretching or shorting their length, since each spring has been designed in detail for the work it does

The solenoid is surrounded by a sleeve. These two parts fit into a well in the pinion and gear housing. Between the sleeve and coil assembly and the bottom of the well there are two retainers—a flat retainer washer and a tension-type retainer. The stack up of these parts is very important to the functioning of the solenoid.

The solenoid hold-in winding ground circuit is through the solenoid core, the sleeve, the two retainers, the pinion and gear housing and into the engine and battery ground strap to the battery.

To prevent a voltage drop through these parts, it is essential that all surfaces be clean and free of corrosion and assembled properly.

The tension-type retainer requires a pre-set to provide tension to hold these parts tightly together at the time of assembly. This is made possible through the tangs on the retainer. Before a new retainer is installed these tangs extend away from the main body of the retainer farther than after tightening.

At assembly the tangs are compressed enough to hold the stack-up of parts tightly together. If a replacement of any of these parts is necessary, the tension-type retainer must also be replaced to provide for any difference in tolerance dimen-

January: Engine Warm-Up

Ed Lowery will cover engine warm-up, including adjusting various automatic chokes, carb fast-idle mechanism to prevent engine stalling during the warm-up period.

sions.

A dust cover is provided over the gear and drive pinion area of the housing. The cover is a snap-fit and may be removed by prying it out with a screwdriver.

The driven gear is held in position on the pinion shaft by a snap ring. This ring is under tension and, while driving the ring off the shaft with a hammer and punch, a cloth should be laid over the ring to prevent its flying out with an injury as a possible result.

The truarc retainer ring at the front of the pinion gear is rather difficult to remove (Fig. 7) without the aid of a pair of truarc pliers with angle jaws. The pinion shaft may be pushed away from the pinion end for better access after the driven gear retainer is removed. Spread the truarc ring just enough to clear the groove and move it away from the pinion towards the end of the housing

Caution: Spreading the ring too much will damage it.

After removing the retainer ring from the groove, the pinion shaft can be pushed back through the gear assembly and housing. The drive pinion and overrunning clutch assembly and the driven gear can then be lifted from the housing.

Special note should be taken of the relative position of the various washers and retainers that are removed as an aid to reassembly. The

leather brake washer is situated between the driven gear and the gear housing. The purpose of the brake washer is to absorb the thrust as the pinion is released from the ring gear after the engine starts and to slow the speed of the rotating parts to eliminate as much noise as possible.

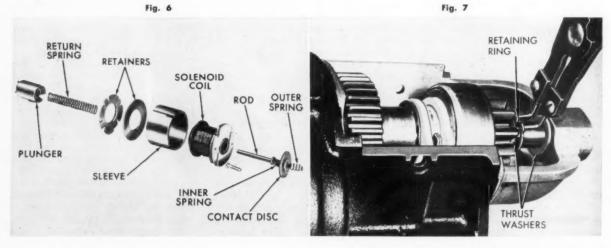
A plain washer is located at both sides of the retainer ring at the bottom end of the shaft to prevent the retainer ring from gouging the drive pinion or pinion housing.

The pinion actuator is retained on the drive pinion and clutch assembly by a retainer ring. The actuator can be replaced when the drive pinion assembly is removed from the housing by removing the retainer ring.

The bushings in the pinion and gear housing are normally serviced as an assembly with the housing.

The bushings, however, may be purchased separately and can be installed, providing the special service tools that are required to remove, install and burnish the bushings are used.

The shift lever and fork assembly are retained in the housing by a split pin. The split pin enters a hole in the housing at one side and then one half of the pin goes on each side of the lever straddling it. The pin then goes through a hole in the opposite side of the housing. The pin is retained by bending the half on the side away from the flange. Straighten the pin to remove.



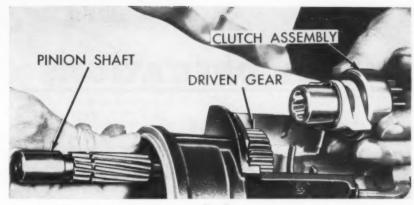




Fig. 8

Fig. 9

The shift lever is formed by riveting together two pieces of spring steel. The two halves of the lever are designed to be free to move on the rivets.

Do not attempt to tighten the rivets. To do so would cause the lever to break. Tight rivets would destroy the proper spring action that is built into the lever.

Cleaning parts:

Never under any circumstance immerse the field frame and coil assembly, armature or the drive pinion and clutch assembly in cleaning solutions.

The insulation on the field coils and the armature windings may be damaged if these parts are immersed. The lubricant contained in the drive pinion clutch will be washed out or diluted if this part is immersed. Wipe them off with a cloth to clean them.

Thoroughly clean the pinion and gear housing. Polish the flat area in the bottom of the solenoid well where the retainer contacts the housing with crocus cloth.

Testing motor components arma-

The armature may be tested in a growler for a short circuit and for a ground with a 110-volt test lamp.

Field coils:

The field coils may be tested for a ground, using a 110-volt test lamp after removing the ground rivet. Since the resistance of the field coils is very low, the use of an ohmmeter or a field current draw test is impractical. Short circuits in the field coils are usually found by testing the assembled cranking motor with a lock torque test.

Assembling cranking motor:

Lubricate between the plates of the shift lever sparingly with SAE 10 engine oil. Position the shift lever in the housing. Start the split pin through the housing with the long half of the pin away from the mounting flange and straddle the shift lever between the rivets with the pin. Push the pin on through the opposite side of the housing and bend the long half of the pin over to approximately a 15° angle.

The pin must not bind against the housing, and both the pin and the lever must work freely in the housing.

Place a drop of engine oil in both of the pinion shaft bushings and insert the pinion shaft into the housing just far enough to position the brake washer and driven gear on the shaft.

Engage the pinion and clutch assembly actuator (Fig. 8) with the shift lever fork and slide the shaft into the pinion and clutch until the shaft splines are visible next to the brake washer.

Place the brake washer over the spline and engage the driven gear with the splines. Hold the shaft and push the pinion and clutch back against the driven gear.

While holding the pinion and clutch assembly against the gear, push the shaft on through until approximately %" extends past the pinion.

Hold the shaft to prevent its sliding out and set the housing down on its brush plate end.

Place one flat washer over the end of the shaft and, spreading the retainer, slide it on the shaft, followed by the remaining flat washer.

Push the shaft on through, making sure that the splines are engaged in the pinion and clutch and the gear. The retainer ring will snap into the groove as the shaft is pushed through. Also be sure to place the brake washer over the shaft shoulder

(Continued on page 78)

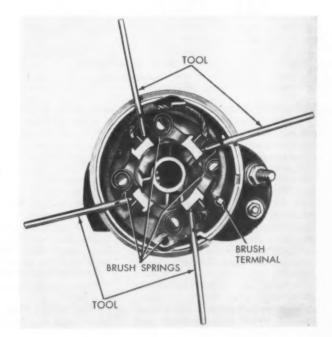
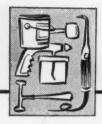
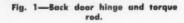


Fig. 10



BODY SHOP OPERATIONS





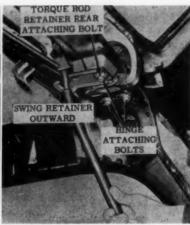


Fig. 2—Back door hinge and torque rod removal.

Servicing 'Back Door' of Buick Special

By E. M. LOWERY Technical Editor

WHETHER it's going on a camping trip or just visiting the corner grocery store, no model can surpass the station wagon when it comes to convenience.

This is especially true when the "back door" operates with the ease that the manufacturers intended. Back doors, like other items, sometimes require some maintenance to keep them in alignment and to assure that they will operate easily.

The following is the recommended service procedure for the Buick Special:

Removal and installation of the back door:

Open back door and mark location of hinge strap on back door inner panel to facilitate installation in same location.

With the aid of a helper to hold back the door, remove hinge-toback door attaching bolts (see Fig. 1) at both hinges and remove back door assembly.

To install back door assembly, first—as an anti-squeak precaution—apply a coat of heavy-bodied sealer to attaching surfaces of both hinges, then reverse removal procedure. Align back door with previously made hinge marks.

Back door adjustments:

Where required, adjust back door as follows:

To adjust the back door assembly up or down or sideways in the back body opening, remove back door lock striker and loosen both right and left hinge to back door attaching bolts. Shift door to desired position on hinges, then tighten hinge attaching bolts and install back door lock striker.

To adjust the upper portion of the back door in or out, proceed as follows:

Remove back door opening upper finishing panels.

Mark position of torque rod retainers (see Fig. 1) at both right and left hinges to facilitate repositioning retainers in same fore and

aft position.

Using a suitable length of pipe over end of torque rod, release tension of torque rod from retainer. While tension of torque rod is released from retainer, loosen retainer attaching bolts (see Fig. 1) and then release retainer. Loosen the two remaining hinge attaching bolts. Perform this operation at both

Shift the hinges and back door assembly to desired position, then tighten hinge attaching bolts, making sure torque rod retainers are aligned with previously-made marks. Install back door opening upper finishing panels.

the right and left hinges.

To adjust the lower portion of the door in or out, see "Back door lock striker adjustments."

Removal of back door hinge torque rod and back door hinge assembly:

Raise back door and remove both right and left back body opening upper finishing panels.

Prop the back door in the open position on the side from which hinge is being removed.

Note: If removing both hinges, remove the back door assembly from the hinges.

Mark position of torque rod retainer to facilities installation in same fore and aft position.

Using a suitable length of pipe over end of torque rod, release tension of torque rod from retainer. While tension of torque rod is released from retainer, remove retainer front attaching bolt and loosen (no more than two turns) retainer rear attaching bolt and then swing front end of retainer toward outside of body and release torque rod (see Fig. 2).

If removing left torque rod, remove clip securing torque rod to body upper panel. Loosen antirattle clip attached to both torque rods; disengage torque rod from hinge and remove torque rod.

Remove hinge to back door attaching bolts; remove hinge to body attaching bolts and remove torque rod retainer and hinge from body.

Installation of back door hinge torque rod and back door hinge assembly:

Lubricate both right and left hinge pivot pins with an approved dripless oil (see Fig. 3).

As an anti-squeak precaution, apply a coat of heavy-bodied sealer to surfaces of hinge which contact body and back door.

To install back door hinge assembly, reverse the removal procedure.

Note: When installing hinge torque rod make certain torque rod is properly engaged with hinge, as shown in Fig. 3, and align torque rod retainer with previously-made marks.

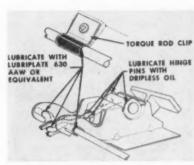
After installation of torque rods, lubricate torque rod frictional surfaces on both right and left hinges and frictional surfaces of both torque rod clips with Lubriplate 630AAW or equivalent (see Fig. 3).

Where required, adjust back door as described under "back door adjustments."

Back door hinge torque rod tension adjustment:

The amount of effort required to open and close the back door is determined by the forward and rearward position of the right and left torque rod retainers. If both torque rod retainers are adjusted to the full-forward position, the amount of effort to raise the lid is the greatest and the amount of effort to close the lid is the least. If both torque retainers are adjusted to the full-rearward position, the amount of effort to raise the lid is the least and the amount of effort to close the lid is the greatest.

Note: It is not necessary to adjust both right and left torque rod retainers at the same time or to the same final position.



Above: Fig. 3—Back door hinge and torque rod lubrication.

Right: Fig. 4—Back door lock assembly removal.



Adjust torque rod retainers as follows:

Raise back door and remove both right and left back body opening upper finishing panels.

Securely prop back door in the open position.

Mark location of retainer to facilitate adjustment from original position.

Using a suitable length pipe over end of torque rod, remove tension of torque rod from retainer. While tension of torque rod is removed from retainer, loosen retainer attaching bolts (see Fig. 1), adjust retainer forward or rearward, as required; then tighten retainer attaching bolts.

Lubricate both right and left hinge pivot pins with an approved dripless oil (see Fig. 3). Lubricate torque rod frictional surfaces on both hinges and frictional surfaces of both torque rod clips with Lubriplate 630AAW or equivalent (see Fig. 3).

Install back body opening upper finishing panels.

Removal and installation of back door trim assembly:

Apply masking tape to back door inner panel adjacent to trim at retaining nail locations.

Using a clean rubber mallet, tap around edge of trim assembly to free trim nails in nail slots.

Insert a flat-bladed tool between inner panel and trim assembly at each retaining nail location. Carefully disengage retaining nails from retaining slots in inner panel and remove trim from door.

To install, reverse removal procedure. Broken retaining nails should be replaced with repair tabs which are available as service parts.

Removal and installation of back door lock assembly:

Remove door trim assembly as described under "back door trim assembly."

Remove three back door lock attaching screws from face of lock pillar (see Fig. 4) and remove lock through hole in door inner panel.

To install, reverse removal procedure. Check operation of lock before installing inside trim.

Back door lock striker adjustments:

To adjust the back door lock striker forward or rearward to obtain in or out adjustment of the lower portion of the door, or to adjust the striker sideways to obtain proper alignment with the back door lock rotary bolt, loosen striker attaching screws, shift striker to desired position and tighten screws.

Lock striker emergency spacer requirements:

The back door assembly should be properly aligned in the body opening before checking spacer requirements.

To determine if lock striker emergency spacers are required, apply modeling clay or body caulking compound in the lock striker notch where the lock extension engages; then close the back door to form a measurable impression in the clay or caulking compound (see Fig. 5).

When dimension "A" from inside face of striker teeth is less than 3/16", install one or more 1/16" emergency spacers to bring dimension "A" to the specified 3/16". If two or three spacers are required, install ½" longer striker attaching screws. If three or four spacers are required, install ½" longer striker attaching screws.

Note: Dimension "B" from center

January: The Painter's Problems

The painter has his problems! Tips on how to prevent and correct these troubles which daily face a paint job will be explained in full detail here next month.



Fig. 5—Lock striker engagement check.

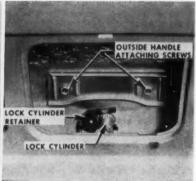


Fig. 6—Back door outside handle removal.

of lock extension to inside face of striker should never be less than $\frac{1}{8}$ ".

Removal and installation of back door outside handle:

Remove back door trim assembly as described under "back door trim assembly."

Remove two screws securing outside handle (see Fig. 6) and remove handle and gaskets.

To install back door outside handle, first cement handle gaskets to handle with weatherstrip adhesive (black) and apply a coat of adhesive to surface of gaskets which contacts door outer panel (see Fig. 6). Then reverse removal procedure.

Removal and installation of back door lock cylinder assembly:

Remove back door trim assembly as described under "back door trim assembly."

Using a hooked tool or other suitable tool, through access holes in door inner panel, pry out lock cylinder retaining clip (see Fig. 6) sufficiently to allow removal of lock cylinder and gasket from outer panel.

To install lock cylinder assembly, reverse removal procedure. Apply weatherstrip adhesive (black) on both contacting surfaces of lock cylinder gasket. Check operation of lock cylinder and lock before installing inside trim.

Removal of back door weather-

With a flat-bladed tool, carefully break cement bond securing butt ends of weatherstrip at bottom center of door and cement bond securing weatherstrip to door for a distance of approximately two inches on both sides of butt joint.

Starting at bottom center of door, insert tip of weatherstrip clip inserting tool (J-5757) or other suitable tool at the first clip and carefully snap clip from retaining hole.

Then, using a flat-bladed tool, carefully break cement bond securing weatherstrip in corner of rabbet to the next clip. Perform the alternate operations of snapping clip out of retaining hole and breaking cement bond to the next clip completely around door; then remove weatherstrip.

Installation of back door 'strip:

Clean off old cement from back door to provide a clean cementing surface.

Check weatherstrip clips for proper contour and reform clips, where required, using clip reforming tool J-5984.

For a distance of two inches on both sides of the butt joint location (bottom center of door), apply weatherstrip adhesive (neoprene type) to the door panel surface contacted by weatherstrip (see "1" and view "A," Fig. 7). Apply a bead of weatherstrip adhesive (black) in the corner of the rabbet, as shown at "2" in sections "B-B" and "C-C" in Fig. 7, completely around door.

For a distance of two inches on both ends of weatherstrip, apply a coat of weatherstrip adhesive (neoprene type) to the weatherstrip surface which contacts the door panel as indicated at "3" in view "A" in Fig. 7.

Starting with end of weatherstrip at bottom center of door, install weatherstrip clips into retaining holes completely around door, using weatherstrip clip inserting tool J-5757. Press or roll weatherstrip completely around door to assure a good cement bond.

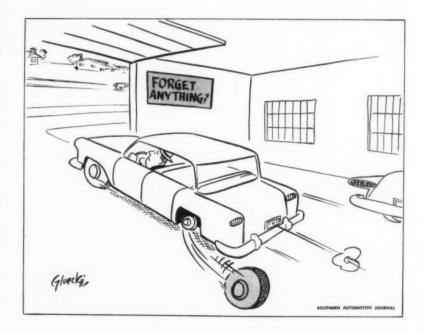
Apply weatherstrip adhesive (neoprene type) to butt ends of weatherstrip and cement ends together to form an even butt joint (see view "A" in Fig. 7).

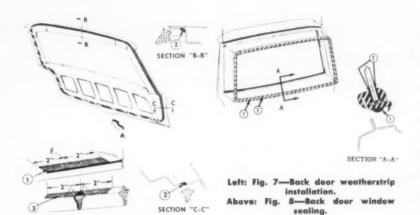
Removal of back door window: From inside body, carefully break seal between inside lip of rubber channel and pinchweld flange completely around rubber channel.

With aid of a helper to support glass on outside of body, carefully push lower edge of glass and rubber channel assembly outward until lip of rubber channel is disengaged from pinchweld flange; then disengage remainder of rubber channel from pinchweld flange and remove rubber channel and glass from back door window opening.

Remove rubber channel and, where present, reveal moldings from

Installation of back door window:





Important: Care should be exercised to make certain glass does not strike body metal during installation as edge chips can cause tempered plate glass to shatter. Do not attempt to grind glass.

Clean off original sealer from rubber channel and back door window opening.

Check back door window opening pinchweld flange for any irregularities and correct, where required.

Install rubber channel to glass. Install reveal moldings in rubber channel. The side reveal moldings overlap the lower reveal molding.

Apply a continuous ribbon of medium-bodied sealer (approximately ¼" thick) to base of rubber channel, as indicated at "1" in section "A-A," Fig. 8, completely around rubber channel.

Insert a strong cord into pinchweld cavity of rubber channel so that ends of cord are at bottom center of glass. Tape ends of cord to inside surface of glass.

With aid of a helper, position glass and rubber channel assembly into door window opening. While a helper is applying hand pressure to outside surface of glass, use a hooked tool to seat lip of rubber channel over pinchweld flange at sides of window opening; then pull cords in rubber channel to seat lip over flange across bottom and across top of window opening.

Using a pressure-type applicator, apply weatherstrip adhesive (black) between rubber channel and glass on inside and outside of glass, as indicated at "2" in Fig. 8, completely around glass and rubber channel. Application of adhesive should be continuous with no skips.

Clean off all excess sealer and adhesive.

How Torque Boxes Work On the New Fairlane

THE new Fairlane has incorporated in its body structure four steel torque boxes which are structural members designed to absorb the force, vibration and torsion or twisting action as the vehicle moves over uneven surfaces (arrows, below).

These boxes tie the front rails and rear rails to the side rocker rails. Two torque boxes are situated behind the front wheels and two are ahead of the rear wheels.

As the front wheels hit a bump, the upward force is absorbed primarily by the front suspension (coil springs). The effects of this force tend to lift the front rails, but since the front rails are tied to their torque boxes, the tendency is for the box to twist or rotate rather than transmit all this force back through the vehicle. Since the front torque boxes are not connected to the floorpan, the effects of the force (movement or vibration) are greatly minimized within the passenger compartment.

The rear torque boxes accomplish this absorption to much the same degree, except that the boxes, for structural design reasons, are connected to the floorpan. Rear suspension forces are absorbed chiefly by the leaf spring and the rubber bushing around the forward spring mounting.

Gasket Replacement Cited by Plymouth

A NEW rear axle housing brake support plate gasket incorporated in production on 1962 Plymouth and Valiant cars can be used on 1960-61 Valiant models if replacement should become necessary, according to a service bulletin issued by Chrysler-Plymouth Division.

The gasket is a white foam polyethylene material and replaces the former paper gasket. It is designed to prevent the possibility of moisture entering the area of the rear axle shaft bearings.

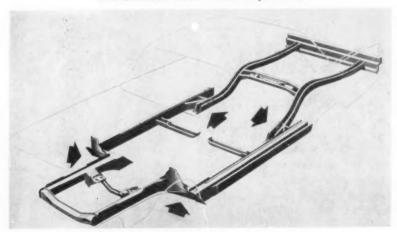
Part number for Plymouths is 2070933 and two per car are required, on each side between axle housing and dust shield.

Valiant part number is 2070932. Four are required for each car, one each side between axle housing and dust shield and one each side between dust shield and axle shaft bearing retainer.

Atlanta SAE Hears Bordinat

Gene Bordinat, Jr., vice president and director of styling for Ford Motor Co., last month addressed the Atlanta (Ga.) Section of the Society of Automotive Engineers on "Creative Design for Creative Management." Bordinat began his care with General Motors in 1939. He joined Ford in August 1947 as supervisor of Ford's advanced styling.

Arrows indicate location of the torque boxes.



1962 PASSENGER-CAR SPECIFICATIONS

(Souped-Up Specs on Standard Models Are Not Listed)

MAKE AND MODEL		7	REAL		ENGINE							UID	CAPA	CITIES	WHEEL ALIGNMENT			
	Std. Wheelbase		Rase	No. Cylinders and	Bare and Stroke	Taxable H. P.		Max. Torque at R. P. M	c	Standard Com- pression Ratio	Crankcase Cap. (Less	Transmission (Refill)	Fuel Tank (Gals.)	Cooling System (No Heater) (Ots.)	Caster (Degrees)	Camber (Degrees)	Toe-in (in.)	
BUICK Skylark V8 BUICK Special V6 BUICK Special V8 BUICK Le Sabre BUICK Invicta BUICK Electra	112. 112. 123 123	1 56 1 56 1 56 62 62 62	56 56 56 61 61 61	V8I V6I V8I V8I V8I V8I	3.50x2.80 3.625x3.20 3.50x2.80 4.1875x3.6 4.1875x3.6	31.5 39.2 4 56.1 4 56.1	155@4600 1 280@4400 1 325@4400	205@2400 220@2400 424@2400 445@2800	198 215 401 401	11-1 8-1 9-1 10.25- 10.25- 10.25-	4 4 4 1 4 1 4	12 12 12 24 24 24	16 16 16 20 20 20	12 10 ½ 12 17 17	-½ to ±½ -½ to ±½ -½ to ±½ -1 to ±½ -1 to ±½ -1 to ±½ -1 to ±½	0 to ±3 s 0 to ±3 s 0 to ±3 s 3 s ±3 s 3 s ±3 s 3 s ±3 s	14 to 44 14 to 44 14 to 44 14 to 44 14 to 14 14 to 14 15 to 14	
CADILLAC 62 Sedan, 62 Coupe, 62 Coupe de Ville, 62 Sedan de Ville, 60 Fisetwood, 62 Eldorado and Biarritz CADILLAC Fisetwood 75		5 61 8 61	61 61	V8I V8I	4x3.875 4x3.875	51.2 51.2	325@4800 325@4800	430@3100 430@3100	390	10.5-1 10.5-1	4 4	18 18	26 26	1814 1934	F.	-½ to -1½		
CHEVY II 4. CHEVY II 6. CHEVY II 6. CHEVROLET Corvair 500 & 700. CHEVROLET 8. CHEVROLET CO	110 110 108 119 119 119	56.8 56.8 54.5 60.3 60.3	56.3	6I 6I 6I V8I V8I	3.88x3.25 3.563x3.25 3.4375x2.66 3.56x3.94 3.875x3 4x3.25 4.3125x3.56	28.4 30.4 48 51.2	90@4000 120@4400 80@4400 135@4000 170@4200 250@4400 380@5800 250@4400	128@ 2300 217@ 2000 275@ 2200 350@ 2800 420@ 3200	194 145 235. 283 327 409	8.5-1 8.5-1 8-1 8.25-1 8.5-1 10.5-1 11-1 10.5-1	4 4 5 4 5 5 5 5	3 6 9 9 3 NA 3	16 16 14 20 20 20 20 20 16.4	8.5 11.5 Air 17 17 1/4 17 1/4 21 15 1/4	1±½ 1±½ 2 to ±½ 0 to ±30' 0 to ±30' 0 to ±30' 0 to ±30' 2 to ±30'	1/2 ± 1/2 1/2 ± 1/2 ±0.22' +30' to ±30' 30' to ±30' 30' to ±30' 0 to ±30'	12 to .18 12 to .18 14 to .18 15 to .16 15 to .15 15 to .15 15 to .15 15 to .15 16 to .10 16 to .11	
CHRYSLER Newport. CHRYSLER 300. CHRYSLER New Yorker. CHRYSLER Imperial	122	60.9	59.7 59.7 59.7 62.2	V8I V8I	4.12x3.38 4.25x3.38 4.19x3.75 4.19x3.75	54.3 57.8 55.9 55.9	265@4400 305@4600 340@4600 340@4600	380@ 2400 410@ 2400 470@ 2800 470@ 2800	383 413	9-1 10-1 10 1-1 10-1	5 5 5 5	18 18 18 18	23 23 23 23	16 16 16 16	$+\frac{1}{4}$ to $\pm\frac{1}{4}$ $+\frac{3}{4}$ to $\pm\frac{1}{4}$ $+\frac{3}{4}$ to $\pm\frac{1}{4}$ $+\frac{3}{4}$ to $\pm\frac{1}{4}$	B B B	1 8 1 8 1 8	
ODDGE Lancer (178 eu. in.)	110	59.4	55.6 57.5 57.5 57.5	6I 6I V8I V8I	3.4x3.125 3.4x4.125 3.91x3.31 4.12x3.38	27.7 27.7 48.9 54.3	101@4400 145@4000 230@4400 305@4800	155@ 2400 215@ 2800 340@ 2400 395@ 3000	225	8 2-1 8 2-1 9-1 9-1	4 4	14 14 18 18	14 20 20 20	11 12 20 20	0000	B B B	18 Prf. 18 Prf. 18 Prf. 18 Prf.	
ORD Galaxie 6 ORD Galaxie 292 cu. in. ORD Galaxie 352 cu. in.	115.5 109.5 109.5 113 119 119	57 55 55 61 61 61 61 61	56 56 54.5 54.5 60 60 60 60	V8I V8I V8I V8I	3.50x2.50 3.50x2.94 4.05x3.78 3.62x3.60 3.75x3.30 4.0x3.50 4.0x3.78	52.49 31.54 45 51.2	85@4200 101@4400 300@4600 138@4200 170@4200 220@4300 300@4600	427@ 2800 203@ 2200 279@ 2200 336@ 2600	170 390 223 292	8.7-1 8.7-1 9.6-1 8.4-1 8.8-1 8.9-1 9.6-1	3.5 3.5 4 5 5	13 13 19 19 19 19	14 14 20 20 20 20 20 20	8.7 8.7 19.5 15 19 19.5	+1½ +1½ -½ to -1¼ -½ to ±½ -½ to ±½ -½ to ±½	45'+30' 45'+30' 0 to +1 14 to 1 14 to 1 14 to 1	14 to % 14 to % 14 to % 15 to 14 15 to 14	
INCOLN Continental	123	62.1	61	V8I	4.3x4.7	59.17	300@4100	465@.2000	430	10-1	51	23	21	22	0 to -90'	0 to 45'	.063 to .18	
ERCURY Meteor 170 cu. in. ERCURY Meteor 221 cu. in. ERCURY Monterey 223 cu. in. ERCURY Monterey 292 cu. in.	114 116.5 116.5 120 120 120		54.5 54.5 56 60 60 60	61 V8I 6I V8I V8I	3.50x2.94 3.50x2.87 3.625x3.60 3.75x3.30 4.0x3.50	31.54 45 51.2		156@ 2400 216@ 2200 203@ 2200 279@ 2200 336@ 2600	144.3 170 170 221 223 292 352 390	8.7-1 8.7-1 8.7-1 8.7-1 8.7-1 8.4-1 8.8-1 8.9-1 9.6-1	334 3.4 4.5 5 4 5 5	15 15 19 20 20 20	14 14 9.5 14.5 20 20 20 20	8.7 8.7 15 19 19.5 19.5	1½±½ 1½±½ ±½ ±½ ±½ ±½	0 to ½ ±½ 0 to ½ ±½ 14 to 1 14 to 1 14 to 1 14 to 1	% to 1% % to 1% to	
LDSMOBILE F85. LDSMOBILE 88	123	61	56 61 61 61	V8I V8I	3.5x2.8 4.125x3.688 4.125x3.688 4.125x3.688	54 54	280@4400	230@3200 430@2400 440@2800 440@2800	215 394 394 394	8.75-1 10.25-1 10.25-1 10.25-1	4 4 4 4	8 11 11 11	16 20 20 20 20	11 19¼ 19¼ 19¼	-3/4 to -13/4 -0 to 1 -0 to 1 -0 to 1	-14 to +34 -14 to +34 -14 to +34 -14 to +34	0 to 1/8 0 to 1/8 0 to 1/8 0 to 1/8	
LYMOUTH 30-D Economy 61 LYMOUTH Savoy, Belvedere &		59.4	57.5	6I	3.4x4.125	27.7	145@4000	215@2800	225	8.2-1	4	14	20	12	С	В	3/8	
Fury V8 1 -YMOUTH Super Fury V8 1 -YMOUTH Valiant 1	116 116 106.5	59.4	57.5 57.5 55.6	V8I	3.91x3.31	48.9	260@4400	340@2400 345@2800 155@2400		9-1 9-1 8.2-1	4 4 4	18 18 14	20 20 14	20 20 11	CCC	B B	181 18	
DNTIAC Catalina	23 23 20 12	62.5 62.5 62.5 62.5 56.8 56.8	62.5 62.5 62.5 56.8	V8I V8I V8I 4I	4.06x3.75 4.06x3.75 4.06x3.75 4.06x3.75	52.8 52.8 52.8 26.4	215@3600 235@3600 303@4600 110@3800	425@2800 190@2000	389 389 194.5	8.6-1 8.6-1 8.6-1 10.25-1 8.6-1 10.25-1	4 4 4 4 4	12 18 18 12 4 4	25 16	1914 1914 1914 1914 1914 13	-1½ to ±½ -1½ to ±½ -1½ to ±½ -1½ to ±½ -1°40'to±30' -1°40'to±30'	+1/4 to ±1/4 +1/4 to ±1/4 +1/4 to ±1/4 +1/4 to ±1/4 +8' to ±30' +8' to ±30'	0 to 18 0 to 18 0 to 18 0 to 18 0 to 18 0 to 18	
AMBLER American De L. & Cust	00 3	54.62 54.62 58.08 58.08	55 58	6I 6I	3.125x4.25 3.125x4.25	23.44	125@4200 127@4200	180@1600 180@1600	195.6 195.6 195.6 327	8-1 8.7-1 8.7-1 8.7-1	4 4 4 4	18	20 20	11 10 10 18	$\begin{array}{c} D^1 \\ D^1 \\ D^2 \\ D^2 \end{array}$	± 1/4 ± 1/4 ± 1/4 ± 1/4	18	
UDEBAKER Lark 6	13 5	57.4 57.4 57.4	56.5	6I V8I V8I	3.56x3.25	40.6	112@4500 180@4500 195@4500	210@4500	259.2	8.25-1 8.5-1 8.5-1	5 5 5		18	17	= 34 0 Prf. = 34 0 Prf. = 34 0 Prf.	0 to +1 0 to +1 0 to +1	E E E	

ABBREVIATIONS

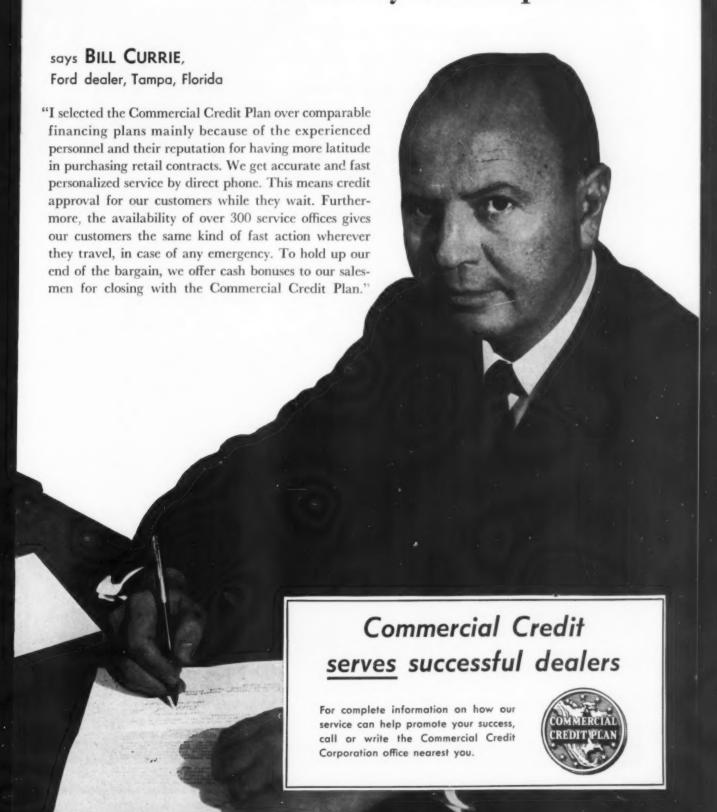
A-Horizontally opposed.

B—Left +½, right +½.
C—Power steering +¾ to +½.
Manual ±½.

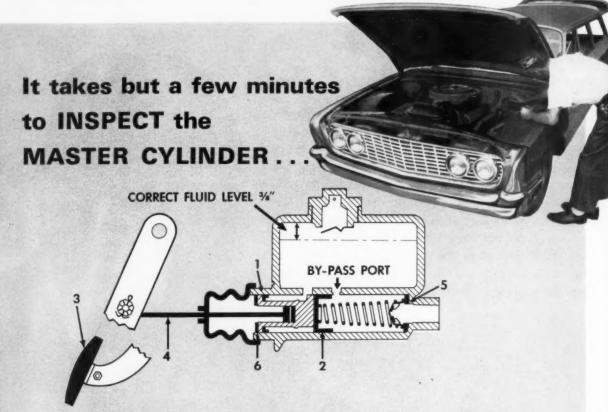
Di—Power steering +2° Prf. Manual 0°. D3—Power steering +1° Prf. Manual 0°. d-4-dr. de luxe 113° E—Power steering 1/16 to 1/8 Manual 3/16 to ½.

F-Left +3/8 to 1/8 right +1/8 to -3/8 I-Valve-in-head L-L-head. Prf.-Preferred.

"...accurate and fast personalized service by direct phone"



Here's how to add



Pull back push rod boot. Presence of fluid indicates external leak at secondary cup (1).

Push pedal down hard, then relax pressure without removing your foot. If pedal gradually drops under light foot pressure, internal pressure leak at primary cup (2) is indicated.

By hand, move pedal (3) to check free play (1/8"-3/8"). Too little free play will cause pressure build-up and brakes eventually drag. Correct free play by adjusting the length of the cylinder push rod (4) (no adjustment on Chrysler products, w/o Pr. Brk., after mid-1958, not equipped with pedal pull back spring). If brake bleeding seems difficult or pedal becomes increasingly "spongy" with

repeated use, check valve (5) may be at fault (spongy pedal may also be due to wheel cylinder cups leaking air in).

Replace faulty unit with a new Wagner® Lockheed® cylinder, or recondition unit with a Wagner Lockheed master cylinder repair kit. To repair, dismount unit, remove stop plate (6) at open end and shove out parts. Clean bore with diacetone alcohol or brake fluid. Pressure marks or discolorations in cylinder bore should be polished with crocus cloth or light honing. If honed, remove burr from by-pass port. Lubricate parts and bore in brake fluid and install parts in reverse of disassembly.

You're always right with the Quality Line

Wagner Lockheed

the best known - and most trusted name in brake service products

LOCALLY MANY PARIS, AUD. BRANE UNINS LIND PARK SHOPS - AIR OR IS - THE PROPERTY OF CONSTANT

brake parts volume

...when a customer's car is left for servicing... also check the brake system

... if inspection discloses new parts are needed . . . install



Wagner Lockheed Hydraulic Brake Parts

unsurpassed for restoring original braking efficiency



Safety-check the brake system of every car you service. You'll discover that many cars need brake service, and that most owners will authorize necessary brake repair work—if you stress the importance of safe brakes. It's an effective way for you to add brake parts volume.

Safe Brakes Protect Lives—and you help protect the lives of your customers when you use Wagner® Lockheed® Replacement Brake Parts to restore original braking efficiency.

These parts fit and function correctly because they are manufactured by the same machinery—to the same specifications—as Wagner parts used for O.E.M. (original equipment manufacturer) needs.

Wagner Lockheed is the most complete line on the market. It includes master and wheel cylinders, repair kits, pistons, springs, washers, cups, hose, cables, and all related items for every make and model vehicle. Available individually or in factory sealed kits.

There's a supplier of Wagner Lockheed Products near you. Look to him for Brake Parts, Brake Fluid, Power Brake Repair Kits, Brake Lining and Lined Brake Shoe Sets. ONE call gets ALL!

Wagner Electric Corporation

Manufacturers of LOCKHEED' Products

FREE--

Catalog AU-500 covering our complete line is yours for the asking. Also inquire about how easily you can qualify to become a Wagner Lockheed Franchised Dealer and enjoy many special benefits. Consult the nearest Wagner Distributor, or write us.



Wagner Electric Corporation

6362 Plymouth Ave., St. Louis 33, Mo., U. S. A.

Please send me Catalog AU-500 covering your complete line.

NAME

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CITY & STATE

in sering the contract of the

WP61-4

1962 PASSENGER-CAR SPECIFICATIONS

(Souped-Up Specs on Standard Models Are Not Listed)

MAKE AND MODEL		,		Bat.	FUEL SYSTEM		VALVES							
	Breaker Gap (.8)	Cam Angle (Degrees)	Contact Arm Spring Tension (Ozs.)	Ignition Timing (Degrees)	Timing Mark Location	Spark Plug Gap (.0)	Spark Advance (Max. Centrif. (Degrees)	Spark Advance Max. Vac. (Degrees)	Cap. & Ter. Grd.	Carts. Mfgr.	Fuel Pressure (Lbs.)	Tappet Clearance Intake (.0)	Tappet Clearance Exhaust (.0)	Intake Valve Opens b or adds
BUICK Special V6 BUICK Special 6 Skylark V6 BUICK Le Sabre, Invicta & Electra	13-19 13-19 13-19	30±1 30±1 30±1	19-23 19-23 19-23	7.5@1050btc 7.5@1050btc 12btc		30-35 30-35 30-35	28@3900 28@3700 22@3800	17.5@16° 17.5@16° 17.5@18°	40N 40N 70N	RP RP RP-Ca	4-5 1/4 4-5 1/4	Au Au Au	Au Au Au	18btc 29b c 28b c
GADILLAC (All Models)	16	28-32	19-23	5btc	VD	35	9@2000	15@20"	70N	RP-Ca	514-614	Au	Au	39tc
CHEVY II 4. CHEVY II 6. CHEVROLET Corvair 500 & 700. CHEVROLET 8 (283 cs. in.). CHEVROLET 8 (327 cs. in.). CHEVROLET 8 (409 cs. in.). CHEVROLET CORVET.	19 19 19 19 19 19 19 19	31-34 31-34 32-34 28-35 26-33 26-33 30	19-23 19-23 19-23 19-23 19-23 19-23 19-23 19-23	4btc 8btc G 5btc 4-8btc 4-8btc 4-8btc 10±1btc	CsP VD CsP FW CsP CsP CsP VD	33-38 33-38 35 33-38 33-38 33-38 33-38 33-38	28@3700 26@2300 H 26@3500 26@3750 26@3750 26@3750 24@4600	23@12° 23@12° M 22@15.5° 15@15.5° 15@15.5° 15@15.5°	42N 42N 35N 53N 53N 53N 53N 61N	RP RP RP RP RP RP	3½-4½ 3½-4½ 5½-6½ 3¼-4½ 5½-6½ 5½-6½ 5½-6½	Au Au Au Au Au .08 Hyd.	Au Au Au Au Au . 18 Hyd.	34btc 34btc 43btc 62btc 33btc 33btc 33btc 32 16btc
CHRYSLER Newport, 300 & New Yorker CHRYSLER Imperial	14-19	27-32	17-21.5	10btc	VD	35	8.5-10.5@2300	11@15*	70N	Ca	4-534	Au	Au	13btc
DODGE Lancer DODGE Dart 8 DODGE Dart 8 DODGE Polara 800	17-23 17-23 14-19 14-19	40-45 40-45 27-32 34-40	17-21.5 17-21.5 17-21.5 17-21.5	2.5btc 10btc	CsP CsP CsP	35 35 35 35 35	14.5@2200 12.5@2300 Q 13@2050	12.5@12.5° 7.5@13° R 12@16°	48N 48N 48N 48N	Ca-Ho Ca-Ho Ca-St Ca-St	4-51/4 4-51/4 6-71/4 4-51/4	10 10 Au Au	20 20 Au Au	8btc 8btc 13btc 13btc
FORD Fairlane 6. FORD Fairlane 8. FORD Fairlane 8. FORD Faicon 144 cu. in. FORD Faicon 170 cu. in. FORD Thunderbird FORD Galaxie 6. FORD Galaxie 6. FORD Galaxie 392 cu. in. FORD Galaxie 352 cu. in. FORD Galaxie 390 cu. in.	24-26 24-26 14-16 24-26 14-16 14-16 14-16	35–38 35–38 26–28.5 35–38 26–28.5 26–28.5 26–28.5	17-20 17-20 17-20 17-20 17-20	2-15@500a 2-15@500a 2-12@500a 6-16@500a 6-16@500a 2-12@500a 2-12@500a	CsP CsP VD VD VD VD VD	32-36 32-36 32-36 32-36 32-36 32-36 32-36	None None 24.5@4000 None 23.5@4000a 26@4000a 24.5@4000a	14@3.94°a 19.8@3°a 17@12.2°a 26@8.3°a 25@18.5°a 25@16°a 17@12.2°a	40N 40N 65N 55N 65N 65N	Ho Ho Ford Ho Ford Ford	4-5 4-5 4-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-	0 0 18 0	16to20 16to20 0 0 18 0	
LINCOLN Continental	15	26-28 1/6	17-20	6btc	VD	34	30@4000	22@18"	80N	Ca	5-6	Au	Au	22btc
MERCURY Comet 144 cu. in. MERCURY Comet 170 cu. in. MERCURY Monterey 6 MERCURY Monterey 292 cu. in. MERCURY Monterey 352 cu. in. MERCURY Monterey 350 cu. in.	24-26 24-26 24-28 14-16 14-16	35–38 35–38 35–38 26–28.5 26–28.5 26–28.5	17-20	C 10@500 6-16@500a 6-16@500a 2-12@500a 2-12@500a	CsP CsP VD VD VD VD	32-36 32-36 32-36 32-36 32-36 32-36	F None 23.5@4000a 26@4000a 24.5@4000a	28@5.35" 19.8@3" 26@8.3"a 25@18.5"a 25@16"a 17@12.5"a	40N 40N 55N 65N 65N 65N	Ho Ho Ho Ford Ford	4-5 4-5 3½-5½ 4½-5½ 4½-5½ 4½-5½	18	16 16 0 18 0	15btc 15btc 23btc 12btc 22btc 26btc
OLDSMOBILE F85. OLDSMOBILE 88 OLDSMOBILE Super 88, 98 & Star	13-18 16	28-32 28-32 28-32	19-23 19-23 19-23	5btc 5btc	CsP VD VD	30 30 30	24@4200 28@4000 28@4000	25.5@16* 26@17* 25@18*	40N 70N 70N	RP RP	4-51/2 5-6 5-6	Au Au	Au Au	22btc 14btc 11btc
Fire PLYMOUTH 30-D Economy 8 PLYMOUTH 318 cu. in. PLYMOUTH 361 cu. in. PLYMOUTH Valiant.	17-23 14-19 14-19 17-23	40-45 27-32 34-40 40-45	17-21.5 17-21.5 17-21.5 17-21.5	2.5btc 10btc 10btc 2.5btc	CsP CsP CsP CsP	35 35 35 35 35	12.5@2300 S 9.5@2200 14.5@2200	7.5@13" T 11.5@13.2" 12.5@12.5"	48N 59N 59N 48N	Ca-Ho Ca-St Ca Ca-Ho	6-7 1/4 4-5 1/4 4-5 1/4 6-7 1/4	10 10 Au 10	20 18 Au 20	8btc 8btc 8btc 8btc
PONTIAC Catalina PONTIAC Star Chief PONTIAC Bonneville & Grand Prix PONTIAC Tempest 4 PONTIAC Tempest 8	16 16 16 13–19 13–19	30±2 30±2 30±2 73-77 28-32	19-23 19-23 19-23 19-23 19-23	6btc 6btc 6btc 6btc 5btc	CsP CsP CsP CsP VD	33-38 33-38 33-38 33-38 30-34	22@3600 20@2850 20@2850 28@4250 28@3700	20@15° 20@17° 20@17° 20@15° 16@15.7°	U U U 42N 42N	RP RP Ca RP RP	514-614 514-614 514-614 4-514 4-514	Au Au Au Au Au	Au Au Au Au Au	14btc 14btc 14btc 14btc 29btc
RAMBLER American De L. & Cust RAMBLER American 400 RAMBLER Classic 6 RAMBLER Ambassador V8	18-22 16 16 15-19	37-41 28-35 28-35 34	17-22 17-21 17-21 17-22	3btc 5btc 5btc V	VD VD VD VD	33-37 33-37 33-37 33-37	14@4000 22@4200 22@4200 36@3800	11@11° 22@16.5° 22@16.5° 20@15°	40N 45N 45N 60N	Ca Ho Ca-Ho Ho	4-51/2 4-51/2 4-51/2	16 12 12 Au	18 16 16 Au	10btc 12.5btc 12.5btc 12.5btc
TUDEBAKER Lark 6 TUDEBAKER Lark 8 & Hawk.	17-22 14-19	37-45 27-31	17-22 17-22	2btc 4btc	VD VD	33-38 33-38	26@1800 26@2300	16@13" 18@13"	50N 50N	Ca St		23to25 23to25		15bte 11bte

ABBREVIATIONS

- a-Au.-trans.-equipped cars only.
- Au-Automatic transmission.
- btc-Before top center.
- C-2°btc manual, 6°btc automatic.
- Ca—Carter.
 CsP—Crankshaft pulley.
- F-Non-centrifugal.
- FW-Flywheel.
- [G-Manual trans. 4 to 10btc. Au. trans. 13 to 18 btc.

- H-Manual trans. 32@3600. Au. trans. 20@3600.
- Ho-Holley.
- M—Manual trans. 23@15.2". Au. trans. 23@16.2".
- N-Negative.
- Q—Std. trans. 12.5@2300. Au. trans. 10@2300. R—Std. trans. 11.5@14.7° Au. trans. 15@18°

- RP-Rochester Products.
- S—Std. trans. 12.5@2300. Au. trans. 10@2300.
- St—Stromberg.
 T—Std. trans. 11.5@14.7"
 Au. trans. 15@18".
- U-53 or 61N.
- V—Manual trans. tdc. Au. trans. 5btc.
- VD-Vibration damper.

NOW...the new

McQUAY-NORRIS

ENGINE BEARING

EXTRA

Durability Conformability **Imbedability**



M.QUAY - NORRIS BEARINGS

THE Blue BOX LINE

... synonymous with quality

The MI-1000 engine bearing has an "extra thin" babbitt lining only .001 of an inch thick, electrolytically applied on a hard and durable sintered copperlead base. The MI-1000 has the fine anti-friction qualities of babbitt plus the terrific strength of copper-lead-so it is easy on the shaft, yet won't pound out under the most severe service.

The combination of the MI-1000 plus McQuay-Norris Heavy Duty, Chrome Control, Leak-Proof Piston Ring set, not only keeps the job running longer, but also cuts gas and oil costs.

Let your McQuay-Norris Wholesaler supply you with the new MI-1000 engine bearing!

the new MI-1000 ENGINE BEARING

- 1. Precision Steel Back
- 2. Sintered Copper-lead Lining
- 3. Barrier Plate
- 4. One thousandth of an inch Babbitt Overlay
- 5. Pure Tin Flash

McQUAY-

McQUAY-NORRIS MANUFACTURING CO. ST. LOUIS . TORONTO



A TOUCH OF FRENCH

Chevrolet cars and trucks belong to America, but the name of the company which celebrated its 50th anniversary last month and its famous "bow tie" trade mark both originated in France.

Louis Chevrolet, for whom the car was named, came to this country in 1900 and soon became known throughout America as a daring race driver-one of the "knights of the roaring road."

His reputation both as a French car builder and as an American



A column of informal comments about the automotive trade and its problems.

MONKEY GRIP

MATS

CAR

- SUPERIOR QUALITY
- . BEST FITTING FOR ALL CARS
- SMART STYLING
- MODERN COLORS
- MATCHING FRONT AND REAR
- DOOR-TO-DOOR AND TWINS
- FULL PRICE RANGE

more to sell - to make you more profit

M-55 AIR-FLITE CAR MAT

Door-to-door protection - Universal fit including '62 standard and intermediate models. Also, Falcon and Comet. All colors. Matching rear mat available.



Strong boxes in attractive desian and colors.

WRITE FOR COMPLETE NEW CATALOG.

showing full line for every car and price range.

MONKEY GRIP SALES CO. P. O. BOX 6170 . DALLAS, TEXAS

speed driver led his path across that of William C. Durant, who, after losing control of General Motors Corp., was looking for a new car with which to return to power in the automobile business.

Chevrolet thought Americans would buy a light car which combined beauty with modest price, like those then being built in France. Durant backed Chevrolet's work, and on Nov. 3, 1911, incorporated the Chevrolet Motor Co.

Chevrolet worked on the designs through 1910 and 1911, but before his experimental models had been put into production in 1912, he left the company and returned to racing.

The name Chevrolet stuck with the vehicles, however, and today it has been put on 45,000,000 cars and trucks

The Chevrolet emblem, which has appeared on billions of cars, pieces of advertising and sales literature, was imported from France by Durant. As a world traveler in 1908, Durant saw the pattern marching off into infinity as a design on wall paper in a Paris hotel. He tore off a piece of the paper and put it in his pocket. Later he showed it to friends as a good design for a car nameplate.

The design was introduced to the world on the 1913 Chevrolet Baby Grand touring cars and Royal Mail roadsters.

Address any comments to: Southern Automotive Journal, 1760 Peachtree Road, N.W., Atlanta 9, Ga.

FOR A BETTER AND LONGER-LASTING SEAL ON ALL CHRYSLER WHEEL CYLINDERS* SINCE 1956..

it's the exclusive



ON with the

Here's the perfect answer to wheel cylinder leaks on Chrysler Products Cars* . . . the NEW and exclusive-with-EIS leak-proof PISTON and patented RIBBED CUP combination! The piston is anodized aluminum . . . the ribbed cup (moulded of HRC‡) is the proven performer that has been successfully used in millions of Chrysler Products Installations since 1941!

Sound EIS engineering has gone into this piston-tup combination. The flexible ribs on the cup . . . an EIS patent . . . provide the proper pressure at the point of seal . . . insure smooth piston movement all the way! That's what makes for a leakproof, longer-lasting seal . . . that's why you should use these new EIS Pistons in your next Chrysler Products wheel cylinder repair job!

EIS combination leak-proof Pistons with Ribbed Cups are incorporated in all EIS Wheel Cylinders designed for replacement on Chrysler Products. They are also available in NEW GD-P Repair Kits containing 2 (1-1/8") Pistons, 2 Cups, 2 Boots and Springs.

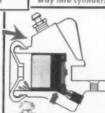




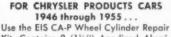
WHEN EIS INSTALLATION IS MADE point-of-seal is intact even though piston assembly is pushed all the way into cylinder!

WHEN ORDINARY

INSTALLATION IS MADE point-of-seal is broken when piston and cup are pushed all the way into cylinder, causing leaks and failure!







Kit. Contains 2 (11/6") Anodized Aluminum Pistons with Flexible Ribbed HRC\$ Cups plus 2 Boots.



SPECIFICALLY DESIGNED FOR REPLACEMENT ON

CHRYSLER 1956-62 DESOTO . 1956-61 DODGE 1957-61 IMPERIAL 1956-62 PLYMOUTH 1957-61



THEAT-RESISTANT COMPOUND

Ask your EIS Distributor or write for catalogs

EIS AUTOMOTIVE CORP ...

Middletown





Directors of the Independent Garage Owners of Tennessee met recently for their semi-annual meeting and elected officers for the coming year. Shown here are (l. to r.): seated, Charles M. Stone, Jr., of Nashville, president; D. D. Keck of Knoxville, first vice president; Howard Stubblefield of Nashville, secretary-treasurer; Ed Penley of Kingsport, second vice president; H. M. Keedy of Chattanooga and Alvin Keith of Knoxville; standing, W. C. "Josh" Wilder of Nashville, A. L. Byrd of Chattanooga, John Baker of Kingsport, Morton Overcast of Shelbyville, Henry Miller of Murfreesboro, Harold Cope of Smyrna, Horton Barron of Kingsport, E. L. Hendrix of Chattanooga, H. C. Gilkerson of Chattanooga and Frank J. Allen, executive director.

Tennessee Garagemen Name Stone President

CHARLES M. Stone, Jr., of Nashville was named president of the Independent Garage Owners of Tennessee at the recent semi-annual meeting of the group's directors.

Other officers are D. D. Keck of Knoxville, first vice president; Ed Penley of Kingsport, second vice president, and Howard Stubblefield of Nashville, secretary-treasurer. Stone was named national delegate to the Independent Garage Owners of America to replace W. C. "Josh" Wilder, who resigned.

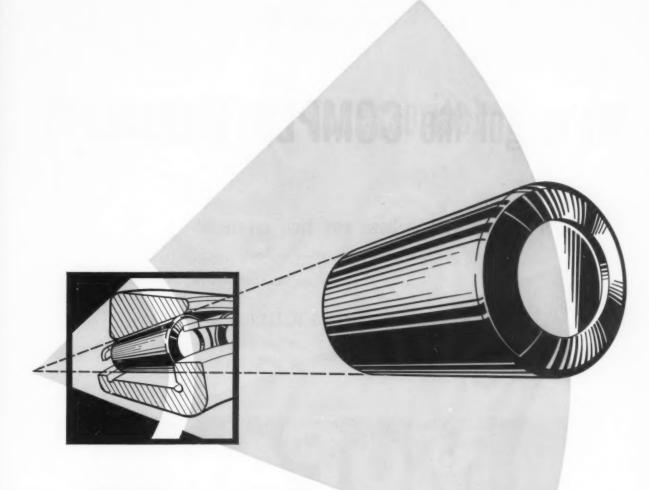
The group has announced plans to reintroduce a mechanics' lien bill in the next legislature.

The board also accepted the invitation of the Chattanooga unit to hold its annual convention in that city the third Saturday in May 1962.

Electric Autolite Ups McGrady

Appointment of L. J. McGrady as director of advertising for The Electric Autolite Co. has been announced by Earl R. Fiene, vice president and director of sales. McGrady joined the company in 1950. Most recently he was advertising manager of the electrical products division.

205 NEWMAN STREET . HACKENSACK, N. J.



What Bower does to roller heads to give tapered bearings longer life

Each roller head has a critical function in a tapered bearing.

Since true rolling depends on exact roller alignment, the contact between roller heads and the surface on which they bear must be controlled. Bower Spher-O-Honed bearings are designed with a spherical radius on each roller head for built-in control. This eliminates sliding and skewing and results in longer bearing life.

Radius grinding of roller heads is the major process in

Spher-O-Honing. In addition, precision honing of cone raceways, flange faces and rollers allows smoother rolling. By providing an O-shaped lubrication groove at the base of the cone flange, friction on roller heads is reduced to a minimum. These processes all contribute to the operating efficiency and longer life of Bower tapered-roller bearings. You'll find that your Bower bearing jobber can supply you with the roller bearings you need, in all types and sizes. Call him when you need replacements.



BOWER ROLLER BEARINGS

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC. . DETROIT 13, MICH.

We've got the COMPLETE QUALITY



line of parts and accessories!

Whatever part you need . . . MoPar's got it

Now MoPar offers a COMPLETE QUALITY line of parts and accessories for most popular makes of vehicles.

FOR CHRYSLER CORPORATION VEHICLES

- ... GENUINE "NEW" MOPAR PARTS AND ACCESSORIES
- ... MOPAR APPROVED REMANUFACTURED PARTS

FOR OTHER MAKES OF VEHICLES

- ... NEW MOPAR PARTS WITH UNIVERSAL APPLICATION
- ... REMPAR QUALITY REMANUFACTURED PARTS

New or remanufactured—these parts fit right, work right, install quickly—save labor time, help keep jobs rolling on schedule.

For fast, efficient service and delivery—for <u>any</u> order of <u>any</u> size—just reach for the phone and call your MoPar Parts Wholesaler, or Chrysler Motors Corporation Dealer.

For quality parts and accessories-you name it-MoPar's got it!



MoPar Parts and Accessories, Chrysler Motors Corporation, Detroit 31, Michigan

Dear Bill.

It does seem that the manufacturers are trying to engineer us mechanics out of a job, but so far we haven't felt it in the shop volume. We're busier than usual this month.

In fact, a lot of the innovations we are seeing announced are the very things we've been crying for for years. Any mechanical improvements in the automobile are welcomed by the mechanic. We don't require poor engineering to "featherbed" our jobs.

The necessary jobs on the big volume of cars in use will keep us busy,



BUSINESS UP 75% IN ONE YEAR TH JENNY° MULTI-JOB WASHER



Despite 20 competitors within a onemile radius and a new four-lane highway that by-passes his station, Chuck Blackburn, operator of Chuck's 66 Service in Arvada, Colorado, has increased his business 75% over last year since he put a Jenny Multi-Job Washer to work.

Chuck can wash 15 cars a day and still handle his gas pumps, lubrication jobs and tire work . . . with only one man to help him. His Multi-Job Washer also works at cleaning motors, power lawnmowers, and filters for restaurants. And keeps his station spotless as well.

Paying for itself in three months, the Multi-Job Washer has reduced Mr. Blackburn's operating costs plus increasing his business. It does not rob or starve his air compressor, and he no longer buys white sidewall cleaner or floor soap for his shop.

Costing only \$349, the Jenny all-electric Multi-Job Washer can increase your profits, too. It does a real cleaning job with no fire, no fumes, no fog. And takes up no more room than a 55-gallon drum. For full details, mail coupon.

	_
Please send me details on the Jenny Multi-Job Washer.	
Arrange for free demonstration.	
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NameTitle	
Company	
Company	
Address	
1	
CityZoneState	ı
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99	

mechanical things being what they are. The better and safer they build them, the better we like it. Our families and ourselves have to buy. drive and maintain these products,

Right now we feel we may have to influence our customers who don't have "sealed for life" bearings not to neglect their lube jobs. If they get the idea that the periodic service they bought in the past was unneccessary, in the face of recent events, then they may well get in trouble by starting to neglect such service and inspection.

In the past we have had advertising trends that led to trouble in the service department. Back in the '30's our factory made a miles-per-gallon claim during an economy drive. Actually it was possible to get the mileage they claimed, providing you kept a steady foot on the throttle and maintained a steady pace of about 37 to 40mph. You just might drop down about 50% in case you decided to stop for the traffic lights, or speeded up to stay with the highway traffic.

Almost immediately we started having trouble with customers who never paid any attention to their mileage in past models. But after reading the fantastic mileage it was possible to get, they started keeping a notebook. Then they started beating us on the head with this notebook which proved they were getting nothing like the mileage claimed.

I'm afraid some mechanics did try to improve their mileage by starving the engine with lean jets, placing restrictors in the manifold and shortening the accelerating pump stroke.

But all in all, we weren't able to beat that rap until the customer got out of the habit of keeping books and when the advertising soft-pedaled the top mileage possible under ideal conditions.

If they are going to cut out the periodic lubrication job, they had better dream up some other excuse for getting the owner to get an oc-

HYPRESSURE JENNY DIVISION

nestead Valve Manufacturing Co., Coreopelis, Pa.

In Canada: Hypressure Jenny Sales & Service, Ltd., 517 Jarvis St., Toronto 5, Ont. (C.S.A. Approved)

60

casional inspection of his car, or I have a feeling our road service calls will pick up.

Speaking of starving the engines on fuel, on several of our compactsand standard-size cars, too-we've had to make adjustments to give the engine more fuel, since both performances and economy complaints were found to be caused by too-lean fuel-to-air percentages. On some of the jobs a richer mixture provided better power which resulted in better mileage. In others a stumble or surge during the transition from idle to main jet operation could be corrected by supplying a slightly richer mixture by changing metering rod or main jet.

Which just goes to show that you can overdo this skimping thing and we have to find it out periodically. So I still feel fairly confident that they won't be able to economize to the point of moving the serviceman out of the picture.

Yrs,

Pre-Planning Shop Vital (Continued from page 35)

takes on a new aspect with expansion. Buying has to be calculated more efficiently, control records more detailed, because stocking becomes more critical. You are aiming for maximum turnover for your investment. The ideal parts stock has to be ample in fast-moving parts.

Depending on our supplier for slow-moving parts, we now have to employ a runner. Though this is added expense, it is essential for turnover and keeping our mechanics busy. Efficient stock control means accurate records and constant watchfulness, for which we employ two stockmen.

Despite the problems of a new operation, we were absolutely committed to the high standards of workmanship that had won us such a large following at our old location. We were determined not to be compromised despite the current chafing of the car-driving public on high maintenance costs of an automobile.

Public reeducation to maintaining the complex automobile today and the highly skilled labor it takes is sorely needed. There is no halfway house between doing the job as it should be done if it is to be done or not at all. A job properly handled does not come at bargain prices in the first-rate skill of a trained mechanic.

Skilled labor today is very costly. This the public has to learn. We try to explain this to them, pointing out that even when we acquired experienced mechanics we retrained and supervised until they achieved the perfection which we demanded of them.

Our exacting requirements of our skilled labor and our own efforts to reeducate the public to quality workmanship at fair prices have paid off. We now have more volume than we can handle. Again we find ourselves working outdoors when the weather permits. The number of new customers turning up grows steadily, though we offer no specials. Quality is bringing them in through word-of-mouth promotion.

Upon relocating we did some radio and newspaper promotion locally, but today find this expense easily eliminated from our overhead. Our reputation for good, dependable work is all we need.

Though we have come a long way in tightening our organization, we find constant watchfulness of expenses and production costs basic to improvement in the profit picture. There is no relaxing.

I cannot stress strongly enough to the garage operator seeking more elbow room to check meticulously into selecting a site, knowing the prospects in a developing area, knowing the county's tax structure on land, buildings, etc., knowing where his volume is going to come from, what he will be up against on parts and figuring out every penny of expense it is going to take to run an expanded business.

He's got to be sure he has enough capital to work with.

Can he find the skilled labor to handle a bigger volume which he wants?

He will have to figure on keeping his skilled mechanics continually trained through factory school and supplier school attendance.

The savings and satisfactions of a new, well-planned shop will be all the more enjoyable if the details of operation are thoughtfully worked out ahead of time.

Can Head Off Complaints

(Continued from page 39)

onds, but it's surprising how many extra jobs slip out of the shop unnoticed and unreported far too many times.

Let's head off complaints by excellent workmanship on every job and paying close attention to the customer's needs, which are often overlooked, thus preventing remarks like:

"I know you will fix it eventually, you always do. But why don't you fix it the first time?"



- FLOW AUTOMATICALLY!
- SHUT OFF AUTOMATICALLY!
- . FILL TO CORRECT LEVEL!
- . BIG 2%-QUART CAPACITY

Ken's New B-70 Automatic Battery Filler quickly fills to correct level—shuts off automatically. No spills... No dripping. Ideal for dry charge batteries. Both valve and container are made of high-impact styrene and polyethylene to withstand long, hard use with either water or battery acids. Also features the only automatic valve for which all parts are replaceable!



Dual-Automatic FILLER and TESTER

Another "first" by Ken, this B-71 Automatic Filler and Tester is combined in a single unit to make battery service a one-stop operation. Fills batteries to correct level automatically.

Tests either 6 or 12 volt systems with visual trouble indicator. Extra wire, with simple clip, makes it easy to locate many



CALL YOUR JOBBER

Put one of these sales builders to work for you now!

Get your pocket-size copy of Ken's all new, complete-line catalog. Ask your jobber or write Ken direct.

THE KEN-TOOL MFG. CO.

Largest exclusive manufacturer of Specialized Tire Changing Tools, Equipment, and Garage Tools . . . Known and used around the World

We Train Our Own

(Continued from page 36)

from scratch. We independent garages have had to find our own solution competing with the dealership and gas station on prevailing local wage scale.

Because of high costs we find at the present time it is impossible for us to take on a young man straight out of school. My son, Bill, whom I trained years ago, and I both feel that a willing youngster who has a driver's license, has spent a little time around a gas station pumping gas, checking on a fan belt, radiator hose and battery may be good potential material for repair mechanic training.

The prime requisite is a willingness to earn, a persistence despite the hard and dirty labor involved in repairing automobiles, a determination to stay with on-the-job training until he can handle complex repairs skilfully and dependably. We rate this attitude even above mechanical aptitude, for we are convinced we can train almost any youngster provided he puts his mind to it. Formal education does not figure importantly in this training

I trained my own son who had the advantage of hanging around our garage in his childhood and youth, and had early been infected with a curiosity and love for mechanical repairs. He had the added benefit of experience as a Navy Yard machinist's apprentice. Adopting the training procedures I once used with him, he helps train young apprentices who have since followed him.

We require of the young trainee that he make himself useful around the shop right from the start. We start with jobs that take simple explanations and simple handling. As mentioned above, our green apprentice already knows how to jack up a car and remove a wheel.

Where We Start

Brake adjustments, lubrications and oil changes are first on the agenda because they are readily explained and handled. We get under the car with him and let him watch as we explain while carrying out a brake adjustment. We point out to him to bring up the brakes 'til snug and back off 'til the wheel is free.

At the next wheel the apprentice is given a chance to carry out a brake adjustment under our eye. We help him, supervise and check it out upon completion.

During this early period he runs errands, cleans up around the shop, cleans parts, changes a wheel, learns to grease a car. This initial period is a very telling one. His willingness is revealed, his adaptability to a variety of jobs, his acceptance and attitude toward instruction and the standards of workmanship expected of him

The apprentice during this period gets his hands into a variety of jobs as he goes along. Assisting mechanics, he will clean parts, clean oil pans, spindles, remove the carbon on valves by placing them under the wire brush of the emery wheel or grinder. The supervising mechanic points out whether the valve is clean enough for refacing.

Cleaning cylinder heads will be another job he may be called on to do. Or he will be asked to change a radiator hose, and a mechanic will check it out for proper functioning.

During lubrication instruction an apprentice is alerted to look for worn and defective parts. Worn spring shackles, broken springs, bad exhaust system, leaking wheel cylinder—these are obvious and easy



MODEL 200 SUPERCLEAN CLEANING MACHINE

This entirely NEW machine introduces a cleaning action by transverse motion. The turbulence created is like an ocean tide. SAVE on cleaning costs with Model # 200! It's insulated with fiberglas. Simple to install — just connect to 110V and gas outlet. Use S-V FERROBRITE cleaning compound for best results.

Clean Better - Faster - More Economically

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STORM-YULCAN, Inc.

MANUFACTURERS OF AUTOMOTIVE ENGINE REBUILDING EQUIPMENT
2225 Burbank Street

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• Dallas 35, Texas



"The profit from 90 Gates Belt sales a month sure helps build our bank balance!"

says Weldon Bauer, partner in Bauer & Patterson 66 Service, 3331 34th St., Lubbock, Texas

"When Fred Patterson and I started in business a year-and-a-half ago, it was our aim to give not only the best service possible, but also to handle the best products we could obtain. We're glad we decided on Gates fan belts, because they've proved to be very important profitmakers...have steadily helped in boosting our bank account.

"It was a lucky day when we set a policy to check the belt *every* time a hood was raised, because our belt sales from then on actually *doubled*. And customers were quick to show their appreciation of this little extra service.

"I might add that Gates Sales Aids have been a wonderful help to us...they make the job of selling and installing belts a cinch."

"Go" Gates for Profit . . . Call your Gates Jobber TODAY!

Your Gates Supplier will have a factory-trained Gates Representative install attractive belt and hose displays, clean up your belt and hose stocks, and supply you with a complete set of Gates station-tested sales aids. He'll also help you get your stock in shape for top profits without losing a penny on your present stock.

The Gates Rubber Company, Denver, Colorado

Gates

World's Largest Maker of Y-Belts

Gates Vulco V-Belts & Hose

TPA 588



"I CAN ALWAYS TELL WHEN ERMA IS MAD — SHE SLAMS THE DOOR!"

motor jobs turn out sweeter when you install . . .

Manley airchrome valves and springs

Manley Valve Corporation, 15th St. & Fairmount Ave., Philadelphia 30, Pa. Supplier to leading original equipment manufacturers. District Sales Representative: J. S. Connell Co., Dallas.

The Mercury Meteor, scheduled for Introduction this month as a solution for buyers who want a smaller car without sacrificing the comfort and convenience of a big car, will be a full-proportioned family car. The 116½" wheelbase is two and a half inches more than the Comet and three and a half inches less than the Monterey. Its over-all length is nine inches greater than the Comet and nearly a foot shorter than the Monterey. Standard engine is a precision-cast, 170-cubic-inch six cylinder which delivers 101hp. The V-8 optional engine weighs 655 lbs. and is rated at 145hp at 4,400rpm. The Meteor will be available in four body styles, including the two-door sedan shown here.

to detect under the car. During this early period it is more difficult to spot wear under the hood. The bad fan belt and leaking radiator hose are about all apparent to him.

How fast an apprentice moves from this first period of several weeks to his second period of more advanced repairs depends entirely on the individual's grasp, willingness, capacity to apply himself.

We usually can tell the kind of material we are working with within three weeks. I think a word is in order at this point on the attitude of the teacher. Patience is the watchword. Continual personal encouragement is as basic as the student's willingness to learn.

Praise him if he has caught on and handled a job well. Show him that you appreciate his effort to learn and be helpful. Make him feel that he can do it, that the job is learnable, as you repeat step by step with explanation. Do not zip through a procedure with the attitude that this is pie and any simpleton ought to catch on in a jiffy. Respect him and build his confidence in himself.

During the second stage of his apprenticeship we place an apprentice at assisting the tune-up man. He will pull spark plugs, clean and test them. He may assist on a rearend overhaul, pulling axles and springs, removing shock absorbers; in other words, parts that are just bolted on and simple to take off.

In front-end work he will pull and replace parts under supervision. He will assist in a motor job by pulling a pan, dropping a pan, pulling a cylinder head off. The quickminded young man may spend a week or ten days at this, someone slower perhaps three or four weeks.

Our approach in apprenticeship is strictly on-the-job. There are manuals on hand for the apprentice who wants to study basic principles. We make known to him the instruction manuals he can take home and study to supplement or review what we give him on the job.

He does not move into his third and final stage of apprenticeship until we feel he has a mastery of the less complicated jobs. During this time he is taught to complete a tune-up, such jobs as removing and setting up and replacing a distributor. He will set timing, adjust a carburetor, learn valve refacing and reseating, fit bearings, pins and rods. Under constant supervision he is shown how to set timing in two or three cases.

Every timing job he carries out for the next three weeks is watched and checked.

Our objective is to make a skilful all-'round mechanic of him. Though we discover talents in a trainee in certain aspects of mechanical repair, we have too small a shop volume to develop specialists. We prepare mechanics to take on any kind of a repair job that turns up.

There was a time when a repair mechanic could be trusted on his own with the most complex repairs within a year, depending on his mechanical aptitude. Today training never ceases: it takes a lifetime to remain a competent mechanic. There is constantly something new to be learned. My son attended transmission schools and factory carburetion schools, studies and refers to factory bulletins continually and re-attends schools to keep fresh and discover any new developments.

Paying our mechanics a weekly wage, we have to meet the competition of area gas stations and garages to hold onto our apprentices. Our trainees earn \$60 for a 55-hour week.

Skilled labor of high quality is the No. 1 problem of the small independent garage. Training your own is the only solution.

San Antonians Elect Stewart

The San Antonio (Texas) Independent Used Car Dealers Association has elected G. L. "Crash" Stewart president. Vice president is Jim Vinall and Robert B. Brown is secretary-treasurer.

Wright Dies in Covington, Va.

Jess Ausborne Wright, 62, owner and president of Covington Motor Co., Covington, Va., died there recently.

FOR RICH RESULTS IN FLEXIBLE PLASTIC



There's no guess work with Claw-Plast "PLATINUM ARMOR" plastic putty filler. One "shot" with "LIQUID GOLD" color indicator hardener does the trick. When mixed, the platinum grey putty immediately takes on a yellowish color. When completely mixed, the yellowish color is evenly distributed. Results are superior . . . even mixing eliminates soft spots, pinholes, blisters and pock marks.

"PLATINUM ARMOR" can also be used with odorless, non-toxic "CREME-GOLD" hardener for those who prefer a cream catalyst.

OTHER "PLATINUM ARMOR" FEATURES:

- . Lowest Dust
- Creamy-Smooth . . . Easy Spreading
- Cures Tough in Minutes
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- Unexcelled Adhesian, Impact and Shock Resistance
- . Light, Pleasant Odor
- . Code-dated Cans . . . Long Shelf Life

Also Ask Your Jobber For:

LOW-DUST SEMI-FLEX

BLACK ARMOR FLEXIBLE



GREY



CLAW-PLAST

Mfg'd by H. CLAUSEN & CO., INC.

Dept. SAJ, 1055 King George Rd., Fords, N. J., P. O. Box 24

No Sludge in New Oil

(Continued from page 33)

the mechanic with a background of knowledge so he can proceed accordingly.

For instance, it is a foregone conclusion that a mechanic will recommend a high-grade oil for use in an engine for which he feels responsible. He knows that the oil is engineered as carefully as the engine it lubricates, so he picks an oil that will be good to the engine.

On the other hand, there is a re-

sponsibility to see that the engine is good to the oil, for when the oil is overheated by hot spots, overcooled by cold operation, contaminated by chemicals and solids, it cannot do the job it was engineered to do.

No engine can be properly tuned if the oil fails to provide a liquid seal at the rings. Nor can the engine operate without internal friction and wear if a good oil film is not supplied. Deposits on working parts can embarrass their action and reduce efficiency.

The important lubricant portion of



E. J. Marting, assistant vice president of McQuay-Norris Mfg. Co., St. Louis, has been elected president of the Piston Ring Manufacturers' Group.



It's the name that has meant QUALITY IGNITION for more than 38 years! Veteran repairmen are quick to pass the word on to beginners - "You just can't go wrong with SHURHIT'S 100% factory-guaranteed service parts." They know from years of actual experience that SHURHIT'S dealer training material, service data and TUNE-UP information can always be depended upon to help build a profitable TUNE-UP business. With one of SHURHIT'S smart looking Service Stock Cabinets, your supply of important replacement parts will be JUST WHAT YOU NEED right from the start . . . no "dead" inventory or running out of essential parts. It's no wonder SHURHIT dealers GROW.

Waukegan, Illinois



SHURHIT PRODUCTS, INC. SHURHIT GROW FASTER - GO FARTHER -MAKE MORE MONEY WITH IGNITION!

the engine then should be provided every type of protection from outside and inside contamination-and protection from the final breakdown of its own additives. In dusty areas special attention to filtering of both the carburetor intake air and the crankcase circulating air is vital. Keep the engine in tune so it is neither too lean nor too rich, and protect from overchoking. Advise drivers against long, idling warmups.

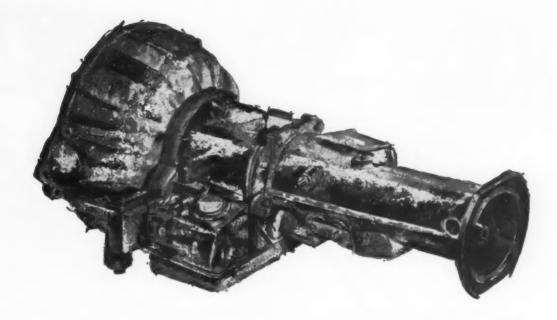
In extreme cases it may be necessary to apply undercoating to oil pan and valve covers to maintain over-all temperature control. Make certain the thermostats are operative and that there is no coolant leakage into the crankcase. Maintain a scheduled oil filter cartridge change

And, although it may not be easy, insist on an oil change when it is needed because of the type of operation, even though the odometer doesn't indicate the maximum possible oil change interval.

Finance Group Elects Hinkle and Meier

VERNON Hinkle, president of The Bankers Investment Co., Hutchinson, Kan., has been elected president of the American Finance Conference and Richard E. Meier, board chairman of Interstate Finance Corp., Evansville, Ind., is the chairman of the executive committee.

Vice presidents are O. C. Carmichael, Jr., board chairman of Associates Investment Co., South Bend, Ind., and Jack Lampl, Jr., president of The Sun Finance and Loan Co. James S. Mentzer of American Security Division of ASC Corp., Marion, Ind., was reelected treasurer.



Treat yourself to the best ...



install Toledo Steel automatic transmission parts

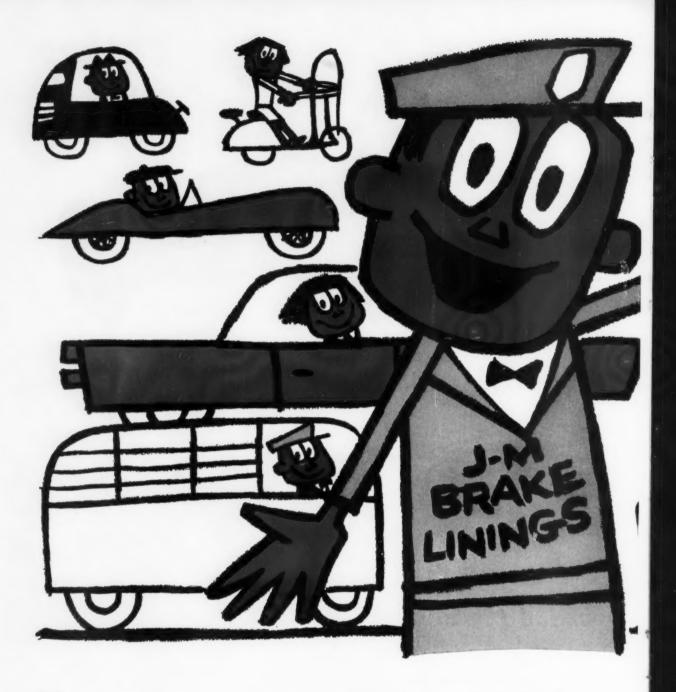
Quality parts that assure trouble-free performance . . . new polyethylene packaging that permits you to select the right seals and gaskets without breaking the factory-fresh seal . . . and realistic parts number listings that assure maximum inventory turnover. These are the major advantages you enjoy when you install Toledo Steel's complete line of automatic transmission parts.



TOLEDO STEEL PRODUCTS

Division of Thompson Ramo Wooldridge Inc.

WORLD'S FINEST AUTOMOTIVE PARTS



You stop more customers when

Safe, dependable stops on the highway mean satisfied customers...the kind who will keep coming back, year after year, for the trouble-free J-M brake linings and brake shoe sets you install.

You can build a solid reputation and a steady, profitable brake lining business on these quality J-M sets:

J-M PB SETS, power-built for power

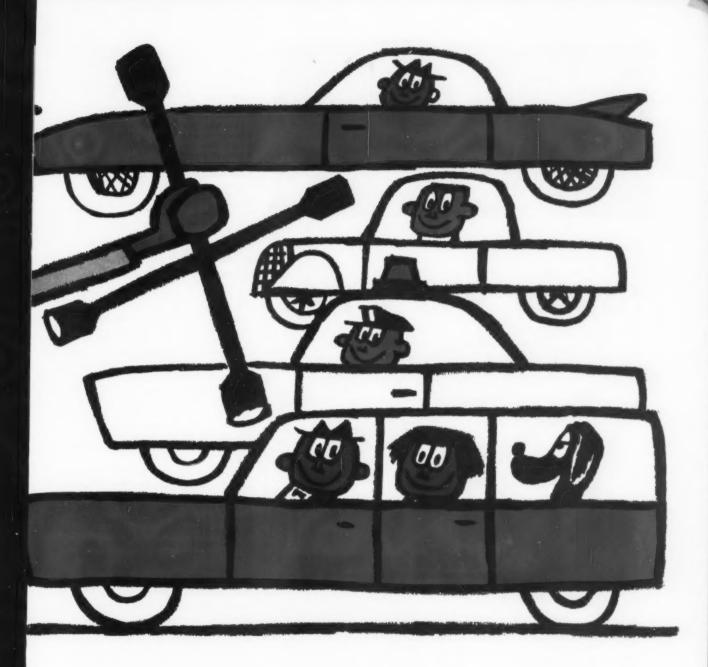
brakes. They are tough and durable ... offer greatest resistance to wear in hard service or on light commercial vehicles.

J-M CFS CUSTOM 4-STAR SETS, for top performance in both power or non-power systems. They assure smooth performance, stability and dependable stops.

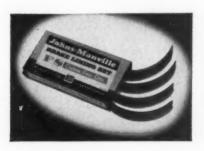
J-M WK SETS, the all-purpose lin-

ings, fully molded, that deliver safe, trouble-free operation . . . yet are competitively priced.

Johns-Manville linings-precision molded of select grades of asbestos fiber and non-scoring metal and friction particles—are the most durable and stable brake linings available anywhere. They are remarkably free from sensitivity to temperature change or wet, humid weather.



you sell J-M Brake Linings!



You'll make more friends – and stop more customers—when you install brake linings made by Johns-Manville, sponsors of the nationallyknown "Wheel of Safety" Program. Get more information from your J-M Distributor, or write Johns-Manville, Box 359, New York 16, N. Y. In Canada: Port Credit, Ontario. Cable address: Johnmanvil.

JOHNS-MANVILLE BRAKE LINING





The 13th annual business conference of Ford Merchandising School gradvates and dealers from the Southeast-ern United States, held last month at Boca Raton, Fla., heard these men on "Meeting the Management Challenge in 1962" (i. to r.): W. E. Currie of Bill Currie Ford, Inc., Tampa, Fla.; Paul M. Millians, vice president of Commercial Credit Co., Baltimore, Md.; W. P. Austin of Austin Ford, Inc., Miami; S. A. Skillman, Southeastern regional sales manager of Ford Division; F. B. Kephart of Arlington Motor Co., Arlington, Va., president of the Merchandising School graduates, and J. W. Mathews, general manager and partner of Austin Ford.

NADA Club to Honor Alfred P. Sloan, Jr.

LFRED P. Sloan, Jr., honorary A chairman of the General Motors board of directors, will be guest of honor at the tenth annual reunion breakfast of the NADA 30-Year Club to be held during the National Automobile Dealers Association convention at Atlantic City.

The breakfast is scheduled for Tuesday, Feb. 6, at 7:45 a.m. at the Traymore Hotel, according to Dave Castles of St. Louis, club president. James M. Roche, vice presidentdistribution, General Motors, will speak.

Other officers of the club are J. Saxton Lloyd of Daytona Beach, Fla., vice president, and James A. Mason of Ferndale, Mich., secretary. Started in 1952, the club is an informal group of NADA members who have been franchised dealers for 30 years or more. The breakfast is the principal activity of the group.

Searchway, Inc., Buys **Baird Dynamic Corp.**

cquisition of the assets of Baird A Dynamic Corp., Stratford, Conn., from The Baird Machine Co. has been announced by Searchway, Inc., Westfield, N. J.

Baird Dynamic operations will continue at the present plant in Stratford for an indefinite period. Formerly operated as a subsidiary of Baird Machine, the organization will now be known as Baird Dynamic Co., a division of Searchway. Inc.

Oldsmobile Names Higgins

Theodore J. Higgins has been appointed Southwestern regional manager at Dallas for Oldsmobile, succeeding F. L. Foerster, who was promoted to central regional manager, with headquarters at Detroit.

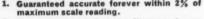




*These are the same torque wrenches used and recommended by leading engine and equipment builders.



well as used springs. Match sets of valve springs for top engine per-formance. Check clutch springs to prolong clutch life.



The only wrench that permits accurate use of adapter & extensions. Patented pivoted handle permits concentrated load position the only way to obtain accuracy with adapters and extensions.

Rugged construction. Can be stored in a tool box with other tools.

Easy to use as any socket wrench.

Signalling models and direct reading styles

A complete range to choose from to meet every service application.

FREE

Torque Specification Book for over 130 makes and more than 1200 models of automobiles, (U.S. and foreign) trucks, makes and more than 1200 models or automobiles, (U.S. and foreign) trucks, tractors, outboards, motorcycles, diesel, aircraft, marine and small air cooled engines. Spark plug, wheel bearing, valve spring data and many helpful torque tips sent free upon request, write Dept. 608



DTURTEVANT ADDISON QUALITY ILLINOIS

TOO MUCH FUEL PUMP PRESSURE RESULTS IN LOW GAS MILEAGE



Fuel pumps are designed to deliver specific amounts of gas according to the requirements of the engine on which they are mounted. If fuel pump pressure is too high above required specifications, the carburetor will be flooded at normal engine speeds. Excessive fuel pressures at carburetor cause gasoline spill over, rough engine idle and low gas mileage. A pressure test will reveal this condition immediately indicating failure within the fuel pump. An inspection may also show raw gasoline coming out around the diaphragm . . . a real fire hazard. All this results in low gas mileage. Replace the faulty fuel pump with long lasting Airtex. Note the new Airtex inspection tip booklet below. This tells how to quickly and easily inspect and check fuel and water pumps . . . how to spot all troubles. Ask your Airtex Jobber for your copy. Call him now!

AIRTEX





GET THIS VALUABLE 20-PAGE INSPECTION TIP BOOKLET ON FUEL AND WATER PUMPS!

Here's one of the most valuable inspection tip booklets in the industry, 20 packed pages of illustrations and tips on how to inspect and check fuel and water pumps. Shows how to inspect easy and fast—to spot trouble immediately—a guide no mechanic or shop should be without. Ask your Airtex Jobber or write today. Also ask your Jobber about the free gifts you get with Airtex fuel pumps.

AIRTEX

AIRTEX AUTOMOTIVE DIVISION AIRTEX PRODUCTS • FAIRFIELD, ILLINOIS FUEL PUMPS • WATER PUMPS

Foreign-Car Owners Like Their Cars

FIFTY-FOUR per cent of the buyers of imported automobiles, purchased new in 1956, 1957 and 1958, still own the same car, according to a survey conducted by the research department of the National Automobile Dealers Association.

A follow-up was made on a survey of 10,000 imported-car owners conducted by NADA in November 1958 and subsequently published in a brochure entitled, "Imported-Car Owners Survey." The questionnaire, sent to the same individuals polled three years ago, sought to determine whether those individuals still owned the same car or, if not, why they sold it. Statistics were compiled from 2,680 replies received by the cut-off date.

Percentage distribution of individuals still owning the same car, listed according to the manner in which the vehicle was rated on various qualities, revealed: riding comfort rated as good by 56%, fair by 40% and poor by 4%. Gasoline

economy: good, 91%; fair, 8%; poor, 1%. Ease of handling in traffic: good, 96%; fair, 4%; poor, less than ½%.

Amount of repairs required: very little repair work, 61%; moderate amount of repair work, 30%; considerable repair work, 9%. Cost of repairs: inexpensive, 43%; very expensive, 12%. Quality of repair work: good, 70%; fair, 21%; poor, 9%.

Owners were asked if they plan to trade for another car within the next six months and 21% replied, "yes." Of that number, 48% said they plan to buy a new imported car, while 31% indicated they would purchase a new American compact.

Of those no longer owning the same imported car bought new in 1956, 1957 or 1958, 92% traded for another ear. The balance of eight per cent apparently left the market completely. Of the 92%, 84% purchased new cars and 16% used cars. Twenty-six per cent bought the same make of imported car; 25% bought another make of imported car; 25% bought an American compact and 24% bought an American standard.

Reasons cited for trading the previously owned car ranged from "wanted a new car," 30%, to "gas mileage less than expected," 5%. "Other reasons" was listed by 36%.

"Wanted a new car" was given as the reason for trading by 62% of owners who purchased a car of the same make, and by 38% of those buying an imported car of a different make. Of those whose reason for trading was: "needed a larger," 37% bought a domestic compact car and 42% a domestic standard car.

"Gas mileage less than expected" accounted for only a small percentage of those citing their reasons for trading in approximately all cate-

Of those who made a trade-in, 66% said they were more satisfied with their present car than with their original imported car, while 22% said they felt about the same. Twelve per cent said they were less satisfied.

Chrysler Appoints Berry

John H. Berry has been named manager of the Plymouth-Detroit assembly plant of Chrysler Corp., having been transferred from the St. Louis assembly plant where he was production manager. Reared in the area of Durham, N.C., Berry majored in business administration at Duke University. He joined Chrysler in 1956 as production superintendent at the Los Angeles assembly plant.

Ask your customers this question:

"Did you freeze on the series of the series



-And then rake in the profits!

Tell drivers how low-temperature thermostats keep heaters from warming up quickly . . . keep drivers shivering mile after mile.

Tell them Winterstat (the high-temp Autostat® Motor Thermostat) prevents premature water circu-

notor Thermostat) prevents lation until it's hot enough to operate the heater properly. Result: faster warm-up, more driving comfort... more profits for you from a few moments' work!

Sell 'em Winterstat . . . sell 'em comfort!



Robertshaw Robertshaw Robertshaw-Fulton Controls Company



FULTON SYLPHON DIVISION

Knoxville 1, Tennessee

AUTO PARTS GET THERE



Got a shipment going hundreds of miles? Get it out by 9 A.M.... it arrives the same day! Got a shipment going about 50 miles? Ship it out around 9 A.M.... it's there by noon!

Whatever the destination of your shipment, chances are, a Greyhound is going there anyway... right to the center of town. Greyhound travels over a million miles a day! No other public transportation goes to so many places—so often.

You can ship anytime. Your packages go on regular Greyhound passenger buses. Greyhound Package Express operates twenty-four hours a day...seven days a week...including weekends and holidays. What's more, you can send C.O.D., Collect, Prepaid...or open a charge account.

CALL YOUR LOCAL GREYHOUND BUS TERMINAL TODAY...OR MAIL THIS CONVENIENT COUPON TO:

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Gentlemen: Please send us complete information on Greyhound Package Express service...including rates and routes. We understand that our company assumes no cost or obligation.

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IT'S THERE IN HOURS...AND COSTS YOU LESS!

Apprentice Training and Clarifying Bylaws Set for Agenda by IGOA

C LARIFICATION of the bylaws and the association's apprentice training program are the two principal items of work to be laid before officers and directors of the Independent Garage Owners of America at their mid-winter meeting in Tulsa Jan, 18, 19 and 20.

Ralph H. James, executive direc-

tor, said there were also a number of administrative matters to be handled by the board, but revision of the bylaw in wordage only, and the apprentice training program, will supply much of the board's work.

"There are a large number of changes that need to be made in wording of the bylaws," James explained. "These changes do not involve policy, or the underlying intent of the bylaws. What we propose to do is spell out the bylaws so they will be more easily understood and as complete as it is possible to make them."

Perhaps an even greater need of IGOA is an apprentice training program in specialized fields, said James.

"The proposal that will confront the board is to break down our apprentice training program into ten different fields, or divisions," James added.

"That is because there is no longer any such thing as a general mechanic. This is the age of specialization, where a mechanic specializes in one operation, or a maximum of a very few operations, all related. A long record of shop experience is no longer enough to qualify a mechanic for a specialized field. Furthermore, if we train an apprentice as a general mechanic he becomes dissatisfied because he soon realizes there is no future for a 'general' mechanic, at least by comparison with the opportunities in the fields of specialists.

"So it seems to be absolutely necessary that our training program be broken up into ten divisions and clarified. Then, of course, it will have to be cleared and approved through the apprentice and training division in Washington."

James said that IGOA had accelerated its activities in Texas late in October and early in November, with meetings that have produced or will result in new chapters.

These meetings involved formation of chapters and election of temporary officers for the Longview-Marshall area, Tyler and the Weatherford-Mineral Wells area, said James. At that time, further organization effort had been projected for the area, including Mc-Kinney, Sherman and Denton.

Hoomes Heads Gulf Dealers

Robert L. Hoomes, owner of Biloxi Motors (Rambler), Biloxi, Miss., is the new president of the New Car Dealers of the Gulf Coast. A native of Brewton, Ala., Hoomes moved to Biloxi ten years ago. He has owned Biloxi Motors since 1952 and has been a Rambler dealer since 1956.

Rivard Dies in Florida

Adrien A. Rivard of Rivard Chevrolet Co., DeFuniak Springs, Fla., died recently.



My Jobber ..

A-3015



ONE-STOP SOURCE FOR HEAVY-DUTY ENGINE PARTS

Need heavy-duty engine parts? Automotive engine parts? Filters? If your requirements call for the best of these, if you need them fast and need them right . . . turn to the Gould-National Engine Parts Division.

Here is a one-stop source of supply for piston rings; cast iron and aluminum-alloy pistons; piston pins; sleeves; sleeve assemblies; valves; valve train parts; oil, air and fuel filters; and other specialized engine parts.

You can get individual parts to meet your exact requirements, or packaged Superior-Arrowhead "matched and compatible" sleeve assemblies and Pedrick Precisioneered® piston ring sets.

Complete line of Superior-Arrowhead foreign car engine parts also available.

For more information on these quality products write the nation's largest basic manufacturer of heavy-duty and specialized engine parts . . .





ENGINE PARTS DIVISION

GOULD-NATIONAL BATTERIES, INC.

St. Paul 1, Minnesota

Superior-Arrowhead is a trademark of Gould-National Batteries, Inc.



1961 Cadillac Modification

Try the XSO-2024 SNAP-ON® BOX-OCKET® to hold the bolt head of the upper arm control shaft when installing a washer under the head of this bolt. Use an impact wrench on the nut. See page 51 of Catalogue X.

1961 Ford Fuel Pump

The SDC-8 Clutch Driver is a handy tool to replace the housing of the fuel pump sediment bowl on the '61 Ford. It's on page 61 of Catalogue X.

Chrysler Product Transmissions

Use the S-8690 Tappet Tool for pulling the front band Servo piston on Chrysler product transmissions. Catalogue $X-page\ 72$.

NEW TOOLS



Shap-on B-1461 and B-1462 Brake Adjusting Tools

Clear obstructions and make adjustments fast and easy with these new SNAP-ON tools. B-1461 — for 1960-61 Corvair, Buick Special, Olds F-85, Rambler and Tempest. Tool has a 29° angle wide-tang with wheel finder radius for rear brakes and a 45° angle tang with a special curve to clear the ball joint on front brakes

B-1462 — for cars and trucks with trailing arms: 1961 Chevrolet trucks, GMC trucks, standard Buick, Oldsmobile and Pontiac cars. Tangs at each end are set at 64° in opposite directions — for work on right or left brakes. Long enough to reach the job, yet keeps hands away from backing plate and brake mechanism. Ask your SNAP-ON man about these and other specials that make your work easy.

Stop Light Switches

Remove or replace hydraulic stop light switches with SNAP-ON P-320½ Socket. It fits all standard switches and is deep enough to protect the connectors. See page 48—Catalogue X.

A copy of Catalogue X is available from your SNAP-ON man. Refer to it constantly for your biggest tool values.

SNAP-ON TOOLS CORPORATION 8050-L 28th Avenue • Kenosha, Wisconsin



New officers of the Automotive Trade Association of Virginia are (1. to r.):
W. B. Leake of Richmond, secretary-treasurer; Stanley Nichols of Covington, third vice president; H. Carter Myers, Jr., of Petersburg, president; C. B. Gifford, Jr., of Norfolk, first vice president; Erle R. Kirby of Arlington, second vice president, and John C. Swanson of Danville, state National Automobile Dealers Association director.

Virginians Elect Myers President

H CARTER Myers, Jr., of Petersburg, Va., was elected president of the Automotive Trade Association of Virginia at the recent annual meeting of the directors.

Other officers are C. B. Gifford of Norfolk, first vice president; Erle R. Kirby of Arlington, second vice president; Stanley Nichols of Covington, third vice president, and W. B. Leake of Richmond, secretarytreasurer.

Besides the officers, directors are Michael Suttle of Newport News, W. H. Bowditch of Hampton, W. O. Lewis of Portsmouth, Philip Farrand of Norfolk, G. E. DuBose of Richmond, N. Starr Beaton of Franklin, Fred W. Beck, Jr., of Petersburg, John C. Swanson of Dan-ville, W. G. Stoneman of Hillsville, John P. Hughes of Lynchburg, O. L. Painter of Strasburg, E. T. Kramer of Harrisonburg, M. E. Tremain of Charlottesville, J. A. Mitchell of Culpeper, J. J. Stump, Jr., of Norton, K. B. Snider of Marion, C. T. Lindsay of Alexandria, Joe L. Hill of Roanoke, Burton Kephart of Arlington and A. H. Shackelford of Roanoke.

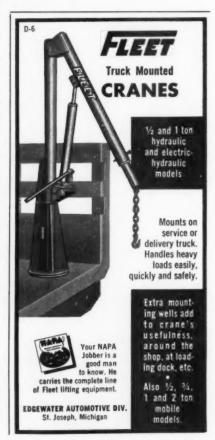
Swanson was elected National Automobile Dealers Association director, succeeding Paul R. Lauritzen of Richmond.

Melbourne, Fla., Picks Schmidt

Carl Schmidt of Schmidt Motors, Inc. (Rambler), has been elected president of the Melbourne (Fla.) Automobile Dealers Association. Other officers are James C. Martin of Martin Pontiac, Inc., vice president, and James E. Lyons of Jim Rathmann Chevrolet-Cadillac, Inc., secretary-treasurer.

Faulkner Dies in Wadesboro

Robert W. Faulkner of Faulkner Pontiac Co., Wadesboro, N. C., died recently in Charlotte.





Roy Abernethy (above) has been elected executive vice president and general manager of American Motors Corp., George Romney, president and chairman, announced. Abernethy, who joined the company shortly after Romney became its chief executive in 1954, has been executive vice president, primarily responsible for sales and distribution of Rambler automobiles and Kelvinator home appliances. He is also a member of the company's board of directors and policy committee. Abernethy started in the automobile business in 1926 as an 18-centsan-hour apprentice mechanic in Pittsburgh while taking engineering courses at night at Carnegie Tech.

Chrysler Corp. Elects Two Vice Presidents

ELECTION of two vice presidents of Chrysler Corp.—Robert Anderson, director of product planning and cost estimating, and Alan G. Loofbourrow, director of engineering—has been announced by Lynn A. Townsend, president.

Anderson was also named a member of the corporation's administrative committee, while Loofbourrow was named to the operations committee.

Anderson joined the company in 1946 as a graduate student in the Chrysler Institute of Engineering. He received his master's degree in automotive engineering from the institute in 1948. Loofbourrow joined Chrysler in 1935. He received his master's degree in automotive engineering from the Chrysler Institute in 1937.

Durham, N. C., Picks Guthrie

The Durham Area (N. C.) Automotive Dealers Association has elected Fred Guthrie of Carpenter's, Inc., Durham, president. Pat Pope of Colonial Motors, Chapel Hill, is vice president and Al Loftis of Stephenson-Wilson, Inc., Durham, is the secretary-treasurer.



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Revamped Cranking Motor

(Continued from page 43)

before installing the driven gear and pinion shaft retaining snap ring.

Inspect the bottom of the solenoid coil well in the housing to be certain that it is free of all corrosion, dirt or grease on the flat area where the tension-type retainer contacts the housing.

While holding the pinion and clutch assembly (Fig. 9) in the drive position, hook the solenoid plunger (moving core) over the shift lever at the bottom of the solenoid well.

Both sides of both retainers should be polished with crocus cloth as well as the inner face of the largest diameter solenoid coil support washer and both ends of the solenoid coil sleeve.

Note: Remember that these surfaces must be clean to provide a good electrical ground circuit for the solenoid hold-in winding. These parts are held together by tension only.

The tension-type retainer must be installed with tangs facing the bottom of the well. Rotate the retainer so one of the tangs will be at each side of the slot in the housing.

Install the flat retainer against the tension-type retainer and insert the long return spring into the hole in the solenoid plunger.

Insert the contact disc and rod assembly in the solenoid coil. Position the barrel-shaped spring on the contact disc and thread the solenoid coil lead wire and the terminal through the holes in the brush holder plate and solenoid cover. Install the nylon washer, steel washer and nut on the terminal and tighten nut with 11/32" wrench.

Install the sleeve on the solenoid coil and lower the coil into the well while carefully guiding the return spring and plunger into the solenoid coil. As the solenoid cover approaches the housing, guide the plastic cover into the open sector in the housing, aligning the tongue on the cover with the notch in the solenoid. Install the screw through the cover and into the housing, and tighten the screw.

Caution: If a new tension-type retainer has been installed, it will also be necessary to position the field frame, end head and the two through bolts in place and tighten the through bolts evenly. This will assist in setting the present tension in the tension-type retainer tangs. The field frame and end head may then be removed and the brush holder plate and cover screw retightened.

Wrap the solenoid coil lead wire around the brush lead and switch contact terminal post and solder the lead to the post with high-temperature solder and resin flux.

Position the insulator and secure it firmly in place with adhesive tape. Install the four brush retaining tools C-3854 to hold the brushes back out (Fig. 10) of the way to prevent their interference with the commutator when the armature is lowered in place after the field coil leads are

With the brushes held back, the field frame can be set in position on one-inch wooden blocks. The shunt coil lead should be wound around the terminal post and soldered with resin core solder. It is important that a good solder joint be made.

Install the brush terminal screw through the brush lead terminal and the series field coil lead.

Position the armature thrust washer (red fiber) on the brush holder plate and lower the armature into position. Lower the armature carefully to avoid burring the driven gear teeth. Mesh the two gears, and after removing the brush retaining tools, remove the wooden blocks.

The fiber washer is installed next to the armature shaft. The fiber washer is available in three thicknesses to provide means of adjusting the armature shaft end play.

Normally, unless the original fiber space washer is lost, there will be no requirement to change this washer. In case the washer is damaged or lost, always choose a replacement washer that will provide .010" to .035" end play in the armature to housing clearance.

Measure the end play with the end head installed but the dust cover removed, by moving the armature back, and measuring with feeler gauges between the housing and the end of the armature shaft gear teeth. The clearance can be adjusted to specifications by use of the proper thickness fiber washer located at the end head end of the armature. This fiber washer should always be installed next to the armature. The steel washer is installed next to the end head.

The adjusting fiber space washers are available as follows:

.020" ± .003" grey fiber .031" ± .003" black fiber .045" ± .0045" brown fiber

After you have measured the end play in the armature shaft (corrected if required) and know that it is within specifications, lubricate the driven gear with SAE 30 engine oil.

Rotate gear to ensure a film of oil on the armature shaft drive gear and driven gear teeth. Snap the dust cover into place and perform a free running test before installing cranking motor on engine.

Note: When removing the cranking motor from the engine on automatic-transmission-equipped cars, remove the hose clamp from the transmission oil filter mounting bracket. This will allow filter to drop down about an inch to provide clearance for removing cranking

"I told you to send him a Christmas present."

secured.



motor.

When installing the motor do not forget the seal that must be installed between the motor and the car's engine.

SPECIFICATIONS

Voltage	12
No. of fields4	(3 series, 1 shunt
No, of poles	4
Brushes	4
Spring tension	32 to 48 Ozs.
Drive	
End play	.010"035"
Free-running test	
Voltage	11
Amperage draw .	85
Minimum speed	
rpm	1950
Stall torque test	
Torque foot-	
pounds	24.0
Voltage	4
Amperage draw	475
Solenoid switch	
Pull-in coil14	.4-16.0 amps
	@ 6.0 volts
Hold-in coil11	.5-12.6 amps
	@ 60 volts

Greases Don't Mix Well, Army Research Shows

CERTAIN types of automotive greases don't mix very well, according to an Army research report prepared at the Rock Island Arsenal Laboratory.

Mixing greases of different types, the study said, "should be regarded as a calculated risk." When the mixed greases are incompatible, it indicated, the resulting drop in lubrication ability may cause bearing failure. This could be expected about 25% of the time, since only 25% of the grease mixtures were found to be affected by mixing with another type.

Based on a total of 1,261 tests, the research showed that "approximately 75% of the mixtures were compatible." In the incompatible mixtures, "more than seven times as many instances of softening were found than instances of hardening," the researchers said.

"Compatibility of Lubricating Greases" is available through the Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C., for \$1.25.

Dodge Appoints Knepp

Appointment of Harold R. Knepp as service manager for Dodge Division's Cincinnati region, which includes Kentucky, has been announced by R. T. Cox, regional sales manager. Knepp, who joined Chrysler Corp. in 1951, succeeds William H. Love, recently appointed manager of field service in the Detroit home office.

Brittain Follows Boyette With Tarheel IGO

THEL G. Boyette has resigned as executive director of the Independent Garage Owners of North Carolina and has been succeeded in that capacity by A. C. Brittain of Raleigh.

The new director, who for several years was employed after school and on weekends by an independent garage owner, was associated with Firestone Tire & Rubber Co. for nine years as office and credit

manager and store manager. Also, he has been partner-manager of a home and automotive supply store.

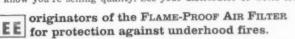
Kimbrough Dies in Houston

Leonard G. Kimbrough, 74, pioneer Houston, Texas, automobile dealer, died there recently. A native of Shiloh, Ala., Kimbrough moved to Houston in 1915 to open the Stevens car dealership. He remained in the automobile business until his retirement six years ago from Krieger Motors.



Over 14,000 cubic feet of air are needed to burn one gallon of gas. Even an average cubic foot of air contains a million particles of dust...dust that chokes filters, ruins gas mileage and engine performance. A new LEE Air Filter turns that dust into

money. Here's how: it takes only two minutes for you to install a flameproof LEE Air Filter—and you make a \$2 profit on every one! You earn big profits on LEE dual-action oil and gas filters too. And, because all LEE filters meet or exceed SAE, OEM and U.S. Government specs, you know you're selling quality. See your distributor or write today.



OLEE FILTER CORPORATION, EDISON, N.J. Canada: 3 Parnell Ave., Scarborough, Ont.





On this and the following pages is an excellent selection of free Automotive literature. List numbers of those desired on the coupon and mail to SOUTHERN AUTOMOTIVE JOURNAL.

103 SAMPLES, BOOKLETS, AND CATA-LOG SHEETS—Describing the DL Handi-Cleaner available on request. DL Products, Inc., Banite Bldg., Buffalo, N. Y.

105 WAGNER AIR BRAKE AND ROTARY AIR COMPRESSOR BULLE-TIN—Discusses in detail straight air and air-over-hydraulic air braking systems. Contains an explanation of the operation of the Wagner Rotary Air Compressor complete with diagrams, cross section drawings, and photographs. Lists by catalog numbers component parts as well as field installation kits. Write for Catalog KU-202. Wagner Electric Corporation, 6362 Plymouth Avenue, St. Louis 14, Missouri.

108 ELECTRICAL EQUIPMENT FOR 1960 PASSENGER CARS — New booklet, fully illustrated covers description of units as well as servicing and adjustments of charging circuit, starting circuit and ignition circuit. Also covers D.C. and A.C. Generators. Delco-Remy Div., Technical Literature Section, Anderson, Ind.

109 AMMCO BRAKE SERVICE, ENGINE REPAIR, AND HONING TOOLS AND EQUIPMENT — Catalogs, describing the Ammco line of brake drum lathes, brake shoe grinders, brake drum micrometers, brake shoe setting gages, brake hones, brake bleeders, brake safety checking instruments, pin fitting honing machines, small bore hones, cylinder hones, cylinder surfacing hones, ridge reamers and torque wrenches. Ammco Tools, Inc., 2110 Commonwealth Ave., North Chicago, Ill.

112 SOUND SLIDE FILM—Entitled "Auin a series of audio-visual aids designed to
provide bearing salesmen servicemen and
replacement parts men with practical and
useful information on various applications
for ball, roller and engine bearings and on
oil seals. Federal-Mogul Service, 11031 Shoemaker Ave., Detroit 13, Mich.

114 32 REASONS FOR OIL CONSUMP-TION—An easy-to-use, indexed corrective manual listing 32 major oil consumption problems and remedies. Informative, illustrated, prepared by one of the top technical staffs in this field. Write — Oil Consumption Booklet, American Hammered, 2001 Sanford Street, Muskegon, Mich.

BRAKE SERVICE GUIDE—Complete instructions for inspecting, flushing and bleeding the brake system. Handy trouble check chart. Write for Bulletin HU-4111, Wagner Electric Corp., 6362 Plymouth Ave., St. Louis 33, Mo.

123 AERO-SEAL HOSE CLAMPS—An ilranges, mechanical information, engineering data, stock numbers, packaging, etc. Breeze Corps., Inc., 700 Liberty Ave., Union, N. J. 125 STANDARD DUTY GENERATOR REGULATORS—A 16-page 8½ x 11 inch booklet covering the operation and maintenance of Delco-Remy regulators, (62 pictures). Contains illustrations showing various steps of adjustment. Will help automotive electricians understand and service regulators. Delco-Remy Service Department, Anderson, Indiana.

133 CATALOG NO. 56—Features more than 300 Champ-Items automotive replacement parts for all makes of cars. A handy service book. Champ-Items, Inc., 6190 Maple Ave., St. Louis 14, Mo.

134 MOOG RINGLINER—Illustrated pisproduct information on complete line of Moog cast iron, partial chrome and Chrome Plus lines. Moog Industries, Inc., 6650 Easton Ave., St. Louis 14, Mo.

141 MOOG STREAMLINER CATALOGtrations and listings of leaf springs, main leaves, spring parts. shackles, shock links, tie rod ends, drag links, king bolts, coil springs and other coil action parts for cars and trucks. Moog Industries, Inc., 6650 Easton Ave., St. Louis 14, Mo.

142 1958 MUFFLER CATALOG SUPPLE-MENT—Lists high efficiency mufflers and dual exhaust equipment for each model of 1958 cars. Grand Automotive Products, 2055 N. Ruby St., Melrose Park, Ill.

144 RADIATOR SERVICING EQUIP-MENT—A new 32 page book "Blueprint For Profits" explains big profits servicing radiators, explains the Inland method, illustrates and describes Inland equipment, free factory training school, payment plan, etc. Inland Mfg. Co., 1108 Jackson St., Omaha 2, Neb.

146 HAND CRIMPING TOOL—Descriptive circular. Strips and also crimps Rajah terminals to ignition cable. The Rajah Co., 35 Verona Ave., Newark, N. J.

149 TIRE & TUBE REPAIR MATERIALS are listed in this new 12-page catalog. Gives the complete line offered and also the stock numbers, quantity in package and the shipping weight. Ace Rubber Co., P. O. Box 6147, Dallas, Texas.

160 SUGGESTED SHOP PRICES ON MApage booklet giving suggested shop prices on everything from align bore blocks to valve jobs. Prices represent average price gathered from jobbers in U. S. and Canada. Van Norman Automotive Equipment Co., 3640 Main St., Springfield 7, Mass. 163 TIRE TOOL CATALOG—Sheets show you the complete Ken Tool line giving specifications for each. Includes explanation of how and where each tool should be used to most profitable advantage. Ken Tool Mfg. Co., 768 E. North St., Akron, Ohio.

164 AIRTEX FUEL PUMPS—New and rebuilt fuel pumps. Catalog AX-70. Airtex Automotive Div., Inc., Fairfield, Ill.

169 YOUR ANSWER TO VAPOR LOCK vapor lock and hot-motor re-starts and explains how Filt-O-Reg helps prevent these conditions and increase engine efficiency. Alondra Sales, Inc., 959 Crenshaw Blvd., Los Angeles 19, Calif.

172 A-1919 FUEL PUMP SHOP MANUAL —Contains the operation, testing, repair, installation and removal of fuel and vacuum pumps. D. Dwyer, AC Spark Plug Div., Flint 2, Mich.

173 HYDRAULIC PARTS—Complete master catalog of the complete line of Eis hydraulie parts. Lists and illustrates the complete line of repair kits, hoses, stoplight switches, brake-master and wheel assemblies. Information complete up to 1961. Eis Automotive Corp., Middletown, Conn.

182 DIESEL SHOP MANUAL—76 pages, includes 275 illustrations, 56 engine reference tables and 26 parts lists. Bacharach Industrial Instrument Co., 200 N. Braddock Ave., Pittsburgh, Pa.

185 PRESCRIPTION FOR BETTER ENlet contains information on how to diagnose a case of excessive oil consumption and how to make the necessary corrections. Perfect Circle Corp., Hagerstown, Ind.

190 STEAM CLEANING—Descriptive liferature gives details on applications and specifications for series 750, 1550, 1800 and 3500 steam cleaners. Homestead Valve Mfg. Co., Coraopolis, Pa.

197 BATTERY TESTING PROCEDURE by step outline of fast, simple and accurate battery testing procedure. Also gives list of recommended testing equipment to have on hand. Delco-Remy Div., Technical Literature Section, Anderson, Ind.

209 MULTI-JOB WASHER—Catalog page shows various applications of this self contained portable model. Homestead Valve Mfg. Co., Coraopoils, Pa.

211 SERVICE TOOL CATALOG—Illustrools designed to solve specific problems for the repairman. Each helps to speed up jobs, make operations easier, cut shop costs. Hastings Mfg. Co., Hastings, Mich.

213 SHOCK ABSORBER CATALOG NO.

320-T-A—A 16-page listing by numbers or by makes—shock absorbers for every automotive need—passenger cars, and some trucks. Monroe Auto Equipment Co., Monroe, Mich.

215 LAHER CATALOG PAGE—Both sides feature passenger car overloads and booster springs. Includes specifications and price. Laher Spring & Tire Corp., 300 Madison Ave., Memphis, Tenn.

INFORMATION CENTER



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Help yourself to free literature and more details on any products mentioned in this issue.

Instead of writing a dozen different manufacturers for free literature and more information on parts, equipment, accessories or services, just insert the appropriate key numbers of the New Product or Booklet listings in which you are interested. For more information on advertisements, just indicate the page number on which it appears.

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226 OIL LEAK DETECTOR — Bulletin oil leak detector reveals internal engine conditions, uncovers main, rod or cam bearing wear, plugged ollways, starved bearings before tearing down the engine. Also describes how the detector checks the completed overhaul and pre-lubricates moving parts before turning over the engine. Illustrates two sizes with maintained oil pressure—one for cars, one for larger truck engines. Federal-Mogul Service, 11031 Shoemaker, Detroit 13, Mich.

228 ENVELOPE STUFFER—Describes in detail the starting fluid, fire extinguisher, spot remover and penetrating oil now available from Spray Products Corp., P. O. Box 584, Camden 1, N. J.

230 SIOUX TOOLS—New Catalog No. 58.
Impact Wrenches, Air Screwdrivers, Valve Cleaners, All-Angle Drill Kit, Electric Screwdriver sets, and Pelican Nut Accumulators for use with impact wrenches. Also complete information on Valve Face Grinding Machines, Valve Seat Grinders, Electric Drills, Hole Saws, Electric Bench and Portable Grinders, Wire Wheel Brushes, Flexible Shaft Machines, Electric Sanders, Abrasive Discs, Electric Polishers, Electric Impact Wrenches, Electric Saws and Flat Sanders. Albertson & Company, Inc., 3100 Lowell Avenue, Sioux City 2, Iowa.

235 METHODS OF TUBELESS TIRE REwith illustrated steps on the permanent repair of tubeless tires, using either the hot or cold vulcanizing methods is available from H. B. Egan Mfg. Co., P. O. Box 1406, Muskogee, Okla.

236 INSTALLATION OF SHOCK AB-SORBERS—Detailed instructions for the removal and installation of direct action shock absorbers. Stem and loop end types for both leaf and coil spring installations. Monroe Auto Equipment Co., Monroe, Mich.

242 AUTOMOTIVE LINES—4-page bookcal tools, giving part numbers, size, case contents, list and dealer prices. Radiator Specialty Co., 1409 W. Independence Blvd., Charlotte 8, N. C.

25 | NEW EATON CAP AND THERMOdescribing Eaton SAFE-CHEK and O.E.M.
pressure radiator caps, thermostats, gas caps,
oil filler caps, and the new Eaton cap tester and thermostat tester. Also catalog-sheet
showing special cap combination offers and
new Eaton cap, thermostat and gasket merchandiser display cabinet which acts as an

"automatic salesman" and saves time in checking inventory and ordering faster moving items. Eaton Mfg. Co., Stamping Div., Cleveland 10, Ohio.

255 TOOL CATALOG "X" — 128 pages gives pictures, descriptions and specifications of the complete line of Snap-On Tools and shop equipment, including the latest electrical and electronic engine testing instruments, wheel aligning and balancing equipment, etc. Snap-On Tools Corp., Kenosha, Wis.

261 SAFETY EQUIPMENT CATALOG—
22 pages describes the full line of directional signals, reflectors, mirrors, flares, flags, fuses, stop and clearance lights, fire extinguishers and other products. Anthes Force Oller Co., 20th St., and Avenue M. Ft. Madison, Iowa.

264 TIRE VALVES, EQUIPMENT AND TOOLS—Complete jobber catalog describes the entire line; giving numbers, description, packaging and weight of each item. Acme Air Appliance Co., Inc., 205 Newman St., Hackensack, N. J.

265 TIRE VALVE WALL CHART—Comtubeless thre valves by car name. Also shows the interchange stock numbers of other manufacturers. Acme Air Appliance Co., Inc., 205 Newman St., Hackensack, N. J.

266 NEW COMPRESSOR CATALOG—16 pages includes specifications on two stage and single stage compressors plus specifications on compressor pump and Hi-Pressure Washers. Catalog has several pages on accessory items and a section devoted to helping you choose the correct compressor for you. Champion Pneumatic Machinery Co., 825 N. Pleasant St., Princeton, Ill.

268 HI-PRESSURE WASHERS — 4-page tion and uses of the washers offered by Champion Pneumatic Machinery Co., 825 N. Pleasant St., Princeton, III.

269 IGNITION PARTS MERCHANDISER
—New 16 page illustrated manual describes and pictures complete new line of Merchandisers, their purpose and value to all types of ignition repair shops. Guarantees results through easy to read, up-to-date cataloging, backed up by reliable information and accurate specifications to take "guess work" out of ignition business. Guaranteed Parts Co., Inc., Seneca Falls, N. Y.

270 1960 TUBELESS TIRE VALVE WALL free chart lists 67 models of 18 major American cars, with their corresponding wheel size; tire size; manufacturers' recommended tire pressures, both front and rear; plus complete recommended valve information both for 1960 models as well as earlier model cars. It also gives comparable information for 28 models of 12 popular foreign make cars. The Dill Mfg. Co., 700 E. 82nd St., Cleveland 3, Ohio.

271 AUTOMOTIVE CHEMICALS—4 page catalog gives description of each item in the Permatex line giving uses, parts numbers and sizes. Permatex Co., Inc., 300 Broadway, Huntington Station, New York, N. Y.

273 "HOW TO EARN BIG PROFITS IN how to spot and sell brake service prospects. Shows how a small investment in brake equipment will yield annual return of over 267%. Includes a check list of equipment and accessories necessary for a profitable shop. Ammoo Tools, Inc., 2100 Commonwealth Ave., North Chicago, Ill.

274 EQUIPMENT CATALOG — New 24 page catalog includes Telaliner and Magnetic Gauge units, on and off the car balancers, body frame machines, safety testing equipment, and the tools and gauges for every phase of alignment work. Bear Mfg. Co., Rock Island, Ill.

275 PISTON RING—16-page booklet contains a description of the Modern Power features of Ramco Piston Rings complete with illustrations. Ramsey Corp., P.O. Box 513, St. Louis 66, Mo.

283 CARBURETOR WALL CHART—
Three color 17" x 22" trouble shooter chart locates the sources of seven common types of carburetor trouble and gives specific causes and remedies. Hygrade Products Div., Standard Motor Products, Inc., 37-18 Northern Blvd., Long Island City 1, N. Y.

299 SELLING RING JOBS—8 page folder entitled "The Sealed Power 4-Way Check Plan" shows you the essential points necessary for successful ring jobs. Will greatly assist you in doing a better selling job with customers. Sealed Power Corp., 500 Sanford Ave., Muskegon, Mich.

300 VALVE CATALOG—No. 59 gives 29 pages of alphabetical valve listings, and also includes interchange list and numerical list. Manley Valve Corp., 1523 Fairmount Ave., Philadelphia 30, Pa.

305 DUAL - PURPOSE TIRE REPAIR catalog describing new Self-Vulcanizing Dual-Purpose Patches. Metal dispenser cabinet for shop use—patches packed in handy dispenser cartons. Monkey Grip Sales Co., P. O. Box 6170, Dallas 22, Texas.

306 NEW FRICTION TAPE DISPLAY—
line of Monkey Grip Friction Tape and
Plastic Electrical Tape, features new merchandising rack for carded Friction Tape.
Also, counter display containers for boxed
tape. Monkey Grip Sales Co., P. O. Box
6170, Dallas 22, Texas.

307 TIRE REPAIR MATERIALS, AUTO MATS AND AUTOMOTIVE RUBBER PRODUCTS—New complete 24 page catalog covering Monkey Grip Products for the Automotive Trade. Colorful. Illustrated and informative. Monkey Grip Sales Co., P. O. Box 6170, Dallas 22, Texas.

308 TUBELESS TIRE REPAIR PLUGS—wheel puncture repairs in Tubeless Tires are described in new catalog. Plugs are available in complete shop assortment kit, consumer kit, and packages according to size. Monkey Grip Sales Co., P. O. Box 6170, Dallas 22, Texas.

309 ACILLOSCOPE AND TUNE UP MANUAL—A new manual explaining operation of AC's new ACilloscope spark plug tester and giving instructions for easy and accurate engine tune-up work. The 44 page manual contains more than 100 illustrations and is divided into five sections for easy reference. Advertising Dept., AC Spark Plug Div., 1300 N. Dort Highway, Flint 2, Mich.

3 | 1 TUNE UP SPECS—8-page booklet containing latest 1961 ignition tune up specifications for trucks, small engines and tractors is being offered free by Standard Motor Products Inc., 37-18 Northern Blvd., Long Island City 1, N. Y.

BOOKLETS FREE!

314 WAGNER BRAKE PARTS CATAence to fast-moving brake parts and lining,
covering popular models of cars and trucks.
Catalog also lists complete stock of shoe exchange sets, as well as CoMax bonded lining segments available to those interested
in bonding lining in their own shops. Wagner Electric Corporation, 6362 Plymouth
Avenue, St. Louis 14, Missouri.

316 20,000 VOLTS UNDER THE HOOD electrical units in the ignition circuit. It shows how battery voltage is built up to 20,000 volts at the spark plug. Delco-Remy Division, Anderson, Ind.

317 THE CRANKING CIRCUIT — This shows the units in the cranking circuit and how they operate together as a team to crank the modern automobile. Written in simple non-technical terms so it can be easily understood. Delco-Remy Division, Anderson, Ind.

3 19 BRAKE AND SHOCK CATALOG—20 page catalog and price list of Girling brakes and shock absorbers for imported cars. Covers popular models from 1948-1959. Includes brake and clutch supply tanks, lined brake shoes, brake parts, service kits, disc brakes and shock absorbers. Lucas Electrical Services, Inc., 501 W. 42nd St., New York 36, N. Y.

320 NEW DEALER CATALOG OF MO-Features the complete Storm-Vulcan jobber line of engine rebuilding machines. Attractively printed in two colors, punched and slotted for inclusion in jobber salesman's catalogs. Storm-Vulcan, Inc., 2225 Burbank St., Dallas 35, Texas.

334 TIRE VALVES, PARTS AND ACCESSORIES CATALOG—New 24 page dealer catalog, No. 14. Illustrates and describes complete line of tire valves, parts and accessories. Included with each catalog is latest tubeless tire valve application chart indicating the proper valves to be used with any model of American and popular foreign make cars. Operating information, specifications, ordering, and packaging information are given for each applicable product. Dill Mfg. Co., 700 E. 82nd St., Cleveland 3, Ohio.

341 TRENDS IN TUBE AND TUBELESS TIRE REPAIR—12 page brochure, contains actual field case studies of two major truck fleets, a bus fleet, and 2 service stations in tire repair with electrical vulcanization. It examines each of these operations, pin-pointing each subject's benefits from and reasons for using Dillectric methods and equipment. Dill Mfg. Co., 700 E. 82nd St., Cleveland, Ohio.

343 CASE HISTORY REPORT—ENGINE BALANCING—A special report to fleet operators shows how Burlington Truck Lines, Galesburg, III., saved \$6000 the first year by balancing driveshafts, crankshafts, and fity-wheels on 2500 units. The report explains how the Bear No. 354 B & RV Balancer increased engine life 25% and reduced engine teardown time 20% for Burlington. Bear Mfg. Co., Industrial Div., Rock Island, III.

344 TELALINER SERVICES CATALOG scriptive material on Telaliner units, and shows how this electromagnetic machine quickly and accurately measures alinement angles. Bear Mfg. Co., Rock Island, Ill.

345 HYDRAULIC BRAKE WALL CHART —Spiral bound listing up-to-date parts information for passenger cars and trucks, including listings for master and wheel cylinder repair kits, stop light switches and brake hoses. Els Automotive Corp., P. O. Box 701, Middletown, Conn.

346 INSTRUCTION PAMPHLET FOR PLASTIC PUTTY FILLERS—Colorful, illustrated easy-to-follow guide gives step-by-step body repair instructions using CLAW-PLAST fillers. H. Clausen & Co., Inc., Dept. SAJ, 1055 King George Road, Fords, N. J.

350 1961 PISTON RING SPECIFICAring specifications for all popular cars, trucks, tractors and small bore engines, with numerical cross reference. Hastings Mfg. Co., Hastings, Mich.

352 MASKING CHART—A step-by-step photo chart on fast, economical masking of automobile bodies for refinishing. Shows 12 recommended steps for masking. Department Mi-13, Minnesota Mining & Mfg. Co., 900 Bush Ave., St. Paul 6, Minn.

355 OIL SEAL WINDOW-WALL POSTER

New 20" x 30" two color window wall poster that sells oil seals by promoting brake relining and wheel repacking is now available. It shows what most vehicle owners think when shown an "oil seal," and offers the serviceman or mechanic an opportunity to talk about brake relines and wheel repacks. Chicago Rawhide Mfg. Co., 1301 Elston Ave., Chicago 22, III.

356 1961 TUNE UP CHART — 20 page cars, including the 1961 models and compacts. Also gives complete listing of ignition service parts numbers necessary to repair various electrical items. Includes information on proper methods of pushing and towing automatic drive cars. Also lists merchandisers, dealer sales aids and complete catalog service. Guaranteed Parts Co., Inc., Seneca Falls, N. Y.

359 OIL SEAL MERCHANDISING BROchurk—Realizing that most service and repair outlet operators are too busy for lengthy product sales dissertations from salesmen, C/R has created a pocket-size merchandising brochure that gives a product sales story in just 65 seconds. Also gives complete picture on the new 1961 merchandising package. Chicago Rawhide Mfg. Co., 301 Elston Avenue, Chicago 22, Ill.

368 SEALANT APPLICATION CHART—
structions, such as setting; drying; application use; temperature and resistance. Also
the convenient Application Gun and Tip is
illustrated. Permatex Co., Inc., 300 Broadway, Huntington Station, Long Island, N. Y.

369 NEW GAUGE CATALOG — Catalog Motive gauges, including deluxe line of steering post mounted ampere, oil pressure and water temperature gauges; economy under the dash mounted gauges, plus combination gauge kits and individual ampere,

oil pressure and water temperature gauges. In addition, the catalog also displays the tubing, fittings, panel brackets and light source kits necessary to make all installations. Accurate Products, Inc., 135 N. Spring St., Indianapolis, Ind.

37 AUTOMOTIVE REPLACE—No. A59, 18 section catalog covering automotive parts categories consisting of brake, wheel, steering, suspension, filler cap, electrical carburetor, fuel, cooling, engine, vaive, rubber, exhaust, universal joint parts, plus supplies. Two sections are devoted to general parts. Distributing warehouses are listed on back cover. Accurate Products, Inc., 135 N. Spring St., Indianapolis, Ind.

373 IMPORTANCE OF PROPER LUBRI-TIRE BEADS—Technical Service Bulletin No. 101 tells approved procedure for mounting and demounting tires. American Grease Stick Co., Muskegon, Mich.

374 "FREEZE - PROOF" WEATHER CHANGE-OVERS—Technical Service Bulletin No. 102 gives winterizing service tips for eliminating cold weather squeaks. American Grease Stick Co., Muskegon, Mich.

375 PROPER FUNCTIONING OF MANITECHNICAL SERVICE BUILDING TO WALVES—Technical Service Bulletin No. 103 explains how to get best results in lubricating the manifold heat control valve for free operation. American Grease Stick Co., Muskegon, Mich.

376 AGES SPECIALIZED LUBRICANTS—
376 Full-color Catalog Insert illustrates
and describes complete line of automotive
shop and resale products, including RuGlyde
Rubber Lubricant. Sil-Glyde Lubricating
Compound with Silicone, Lock-Ease Graphited Lock Fluid, Door-Ease Dripless Oil,
Part-Ease Heat Control Valve Loosener &
Lubricant, and Door-Ease Stainless Stick
Lubricant, American Grease Stick Co.,
Muskegon, Mich.

377 TUBELESS TIRE SERVICING — 12
swers questions about mounting and demounting tires on 14° and 15° wheels; tells
how to change the project from "Simply
Awful" to "Awfully Simple". American
Grease Stick Co., Muskegon, Mich.

380 TIPS FOR BETTER SALES & SERVto provide personnel in the gasoline, and fleet and automotive service field with the latest and most informative information on sales and service. Dill Mfg. Co., 700 E. 82nd St., Cleveland 3, Ohio.

389 JENOLIZING — Unique appearance reconditioning method is outlined in describing literature. Shows how car dealers, garages and service stations can profit by this system. Homestead Valve Mfg. Co., Coraopolis, Pa.

410 NEW AIR BRAKE MAINTENANCE BULLETINS — Series of bulletins, each devoted to a single unit. Fully illustrated with cross sectional, exploded and schematic drawings explaining every phase of the operation and maintenance. Wagner Electric Corp., 6400 Plymouth Ave., St. Louis 14, Mo.



NEW PRODUCTS AND CATALOGS

600-Brake Bleeder

For small shops and service stations handling only a few brake jobs a week, a one-gallon-capacity brake bleeder introduced by Grey-Rock Division, introduced by Grey-Rock Division, Raybestos-Manhattan, Inc., Manheim, Pa., features an air pressure safety valve

which operates automatically.

Chain with hook can be used to hang entire unit over job while bleeding sys-



tem. Master cylinder adapters for General Motors, Ford and Chrysler passenger cars are standard equipment. Other features include a carrying handle, adapter fitting and air hose with quick coupling connector. Compact and light, yet sturdily constructed, unit requires little storage space, the manufacurer said.

Want more info? Use coupon on page 81 and you will get it!

601-Warning Light

Economy of operation is claimed for Economy of operation is claimed for the "No. 261" emergency warning light introduced by R. E. Dietz Co., 225 Wilk-inson St., Syracuse, N. Y., which re-portedly provides brilliant 360° visibility protection in a junior size designed for deck, dash or roof mounting.

Approximately 100 warning flashes per minute are produced by a 50cp bulb, which beams through 4 revolving magnifying lenses. Over-all height is 7½", diameter 7¾", weight 4 lbs. and amperage drain 6.5 amperes at 6 volts and 3.25 amperes at 12 volts. Four models are available: "No. 261" with permanent mounting, "No. 261-CO" with contour base mounting, "No. 261-M" with magnetic mounting base and "No. 261-110" model, 110-volt, for advertising display purposes. Lucite lenses are available in red, amber, blue, clear, half amber with half red.

Want more info? Use coupon on page 81 and you will get it!

602-Electrical Handbook

The 1961 edition of the "AEA Electrical Specifications Handbook"

lished each year by Automotive Electric Association, 16223 Meyers Road, Detroit 35, Mich., gives the necessary adjust-ments and test specifications on starters, generators, distributors, regulators and alternators for Delco-Remy, Autolite, Ford and Chrysler.

Data is listed by make and unit model number, and is said to be particularly valuable as a reference when detached units are being repaired or tested. The handbook includes specifications on passenger cars, trucks, tractors, marine, heavy-duty units and those used on offthe-road equipment. Copies may be obtained from the association for \$1.25 a copy, plus postage and handling.
Want more info? Use coupon on

page 81 and you will get it!



603—Alignment Gauge Set

Featuring the "Check-O-Matic System" and "No. 27" universal gauge, the "No. 27AC" alignment gauge set introduced by Bear Mfg. Co., Rock Island, Ill., comes in a bright red carrying case which provides protection, storage and easy transportation for the gauge accessories

"Check-O-Matic" is a series of templates on which information necessary



to check and correct alignment angles has been transposed. Cars with the same specifications are grouped on each template so that by placing the correct template on the "No. 27" gauge, the operator has a "personalized" alignment gauge for each car. Correct alignment is represented on the templates by black squares. When the gauge's spirit-level bubbles do not line up with the squares, "Check-O-Matic's" ruled lines show instantly the number of shims required, where to add or remove them and even accounts for variations caused by different-length suspension arms.

Want more info? Use coupon on page 81 and you will get it!

604-Sealer

For use with all types of antifreeze, all-weather "Irontite" motor seal introduced by Salsbury Corp., 1161 E. Florence Ave., Los Angeles 1, Calif., is said to seek out and seal cracks in truck and passenger-car heads, blocks and leaks in radiators.

Product also prevents antifreeze and coolant seepage, it was claimed. It reportedly conditions water, lubricates water pump seals and may be used winter and summer. It is fast-acting, non-corrosive, non-clogging and is harmless to rubber parts or thermostats, according to the manufacturer.

Want more info? Use coupon on page 81 and you will get it!

605-Hose Clamp

A multi-purpose strap-type clamp with a vibration-proof lock announced by Murray Co., Towson 4, Md., re-portedly will give a positive seal on hose or plastic pipe connections. Only 5 sizes of clamps will fit hose or pipe from 1" to 7½" O. D. Available in elec-tro-plated steel or Series 18-8 allstainless steel, clamps are shipped flat in easy-inventory, space-saving car-

Want more info? Use coupon on page 81 and you will get it!

606-Wheel Cylinder Kit

For replacement on Chrysler 1956-61 cars, a completely redesigned wheel cylinder kit introduced by Eis Automotive Corp., Middletown, Conn., includes the company's patented ribbed-type cup with anodized aluminum piston.

Cup takes the place of conventional

cups and will stop bypass of fluid at inlet ports upon installation, it was claimed. Kit includes springs.

Want more info? Use coupon on

page 81 and you will get it!

607-Warning Signal

A 3-way warning signal that operates with an on-the-dash pilot light, "Saf-T-

Lite," introduced by Kleff Industries, Inc., 366 Canal Place, New York 51, N. Y., has a built-in flasher and is wired to the stoplight switch.

The slightest pressure on brake pedal reportedly causes the stoplights to flash automatically. A flip-switch incorporated in the unit may be used to make stoplights flash while vehicle is parked or in road emergency. Unit operates independently of directional signals. Installation requires only a few minutes, it was claimed, and does not necessitate tools or drilling of holes. Attachment bracket clips and tightens to the lip at bottom of dash panel. Three models fit all cars, both 6- and 12-volt systems.

Want more info? Use coupon on

page 81 and you will get it!

ESTRICALLO MOOG MEAT TREATE



10 feet of wall space is all you need for this fast-selling spring assortment. Compact, convenient display racks and wall banners identify you as a MOOG Spring-Suspension Specialist!



608-Tire Inflater

To seal punctures and inflate flat tires for immediate driving, "Tire-Aire" introduced by Cord Israel Aire" introduced by Cord-Jamaica Corp., 150-26 Hillside Ave., Jamaica 32, N.Y., provides 20 to 25 lbs. pressure and can be used for tube or tubeless tires on the car.

Containing latex sealer "RX-7," the product is a special non-toxic, non-flammable gas, which expands for normal driving for many miles, or to reach the nearest service station, it was claimed. Simple to use, cylinder is attached to any tire valve and sealant seeks out the leak and stops it while the chemical air inflates the tire. Each "Tire-Aire" fixes one flat tire on automobiles; two cylinders are required for one large truck tire. No tools are needed. Can fits in glove compartment. Want more info? Use coupon on

page 81 and you will get it!

609—Alternator Protector

For battery chargers now in use, a safe, add-on alternator protector introduced by Allen Electric & Equipment Co., 2101 North Pitcher Street, Kalamazoo, Mich., reportedly is easy to install on all makes of battery chargers to prevent costly damage to alterna-

tors when charging batteries.
"Model 40-120" reportedly prevents accidentally charging battery in wrong polarity. A signal light indicates re-



connections, open or shorted circuit.

Want more info? Use coupon on page 81 and you will get it!

-Brake Bleeder

A one-man brake bleeder introduced by Eis Automotive Corp., Middletown, Conn., attaches to the company's 5-gal-lon drum of brake fluid, making the drum a reservoir which contains suf-ficient fluid to fill and bleed up to 40

"No. T3100" bleeder does not require air for its operation. One pull-up stroke builds up the required charge for bleed-ing an average car or panel truck, it was claimed. Spring operation elim-inates "pedal pumping" and the need for an extra mechanic on the vehicle. The no-drip hose end fitting opens and closes with a twist. Bleeder is fitted with a universal 3-thread adapter for servicing 85% of cars and trucks.

Want more info? Use coupon on page 81 and you will get it!

611-Gas Cap

Claimed to be theft-proof, leak-proof and siphon-proof, "Nokee" gas cap announced by Badger Mfg. Corp., 1501 Polk St., Chicago 7, Ill., reportedly can be installed in less than a minute without tools and will fit 90% of all 11/2" filler necks.

Cap is pressed into the filler neck of gas line and never has to be removed when filling the tank, the manufac-turer said. There is no chance of backsplashing, it was claimed, and cap will take the full flow from automatic gas nozzles. Cap is chrome-plated.

Want more info? Use coupon on page 81 and you will get it!

612-Fuel System Additive

A fuel system additive to prevent freeze-up and carburetor icing, "Presgas line de-icer and dryer introduced by Union Carbide Consumer Products Co., Division of Union Car-bide Corp., 270 Park Ave., New York 17, N. Y., reportedly helps keep fuel systems clean, prevents stalling and gives faster starts and more engine pep.

One can of the product is recommended for use with each tankful of gas throughout the cold or humid sea-sons. Also recommended for use in power lawn mowers and for outboard motors, the additive is available in 5gallon and 54-gallon containers for fleet

> Want more info? Use coupon on page 81 and you will get it!



ON ALL THREE

when you become MOOG SPRING-SUSPENSION HEADQUARTERS

Every car on the road uses either leaf springs, coil springs or torsion bars . . . and they all need replacing sooner or later. Why pass up this bread-andbutter business when a small MOOG spring assortment lets you cash in on every sagging car that comes your way? It's easy to spot 'em, easy to replace them . . . at a quick, neat profit for you!

MOOG has specialized in making springs for over 40 years and knows all the tricks of giving them extra long life and elasticity. Your MOOG jobber or distributor can give you expert advice in selecting the right size MOOG spring stock for your particular operation. Get in touch with him today!



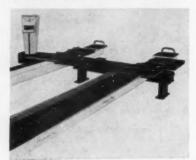
MOOG INDUSTRIES, INC., St. Louis 33, Mo.

MOOG MEANS MORE UNDER-CAR BUSINESS

613—Aligning Equipment

"No. 160-210" alignment service announced by Bear Mfg. Co., Rock Island, Ill., features a drive-over alignment tester built into a fully-adjustable floor-type rack, which operates on the same principle as the company's regular "No. 240" model but is smaller and has a cabinet which gives operator a direct-line reading as he drives the car onto the rack.

The orange and white rack adjusts for tread widths from 38 to 68" wide,



sliding smoothly and easily on rollers mounted at the front and rear crossbeams, it was claimed. Locating pins lock the runways at the desired width. A "No. 27" caster-camber universal caster-camber universal gauge, torsion bar gauges, tracking gauge, tie rod tools and wrenches, air jacks and other tools for alignment checking and correction operations are included with the service.

Want more info? Use coupon on page \$1 and you will get it!

614-Batteries

"Nic-l-lyte" automobile batteries for 6- and 12-volt systems, announced by General Battery and Ceramic Corp., Reading, Pa., are said to contain all the features found on some high-priced batteries and are guaranteed for 30 months-six months unconditionally.

Battery uses a one-piece molded cover and features vent caps which snap in and out. It comes in an aluminized case which reportedly extends battery life by deflecting under-the-hood heat.

Want more info? Use coupon on page 81 and you will get it!

615-Radiator Flush Gun

Containing all parts necessary to purge radiators and cooling systems, a reverse radiator flush gun kit intro-duced by Quad-O-Matic Division of William H. Ransone, Inc., 400 W. Mad-ison St., Chicago 6, Ill., reportedly accomplishes complete cooling system

Companies complete cooling system flushing easily and economically.

Besides the pistol-grip gun, kit includes a special aluminum threaded adapter of the self-holding type which adapter of the sent-holding type which fits all sizes of radiator hose from 1" to 2" in diameter. The larger cone for truck and tractor hose is available as a special accessory. A 30" hose assembly permits maneuvering in small, cramped areas, while additional heater hose adapter is included for reverse flushing of car heater. Washing nozzle, glove insulator, quick-disconnect fitting and degreaser siphoning hose attachment

are additional accessories.

Want more info? Use coupon on page 81 and you will get it!

616-Driveway Signals

Drive signals for single or multiple gas islands, drive-in banks, motels and other entrances announced by Ken-Tool Mfg. Co., 768 E. North St., Akron 5, O., are available in 4 models with parts and accessories to service the entire line.

"Model T-600" operates on 110 di-rect current that eliminates relay, transformer and contact points to line up. It will not continue to ring if a car stops on the hose. "Model T-655" is a 10-volt transformer-operated signal mounted on a 334" x 11" heavy-gauge metal panel and comes complete with 25' of hose, hose plug and anchor. "Model T-653" is a 16-volt transformer-operated unit with a 6" gong and 40' of round tread hose, plus an end anchoring plug. The heavy-duty mod-el signal, "T-652," is adaptable for remote control and is equipped with a 6' plug-in cord, 36' of electric wire and 40' of hose with steel end anchoring plug.

Want more info? Use coupon on page 81 and you will get it!

617—Car-Lifting Book

Containing the results of actual lift tests performed on all new cars and on all types of hoists, a manual, "Lift Proving Tools," published by Globe Hoist Co., E. Mermaid Lane at Queen St., Philadelphia 18, Pa., shows results in photographs and tabulations with facsimiles of laboratory reports. Di-mensional information on treads, wheelbases, etc., is established, to-gether with weight distribution, fore

Want more info? Use coupon on page 81 and you will get it!

618—Transmission Fluid

A specially blended, non-foaming A specially blended, non-toaming formula called "Automatic Transmission Treatment" introduced by Marvel Oil Co., Inc., Port Chester, N. Y., reportedly prevents surging, creeping, slipping and leaking.

When product is added to the transmission fluids proceeding will not consider the contract of the co

mission, fluids reportedly will not con-geal even in sub-zero weather and seals remain soft and pliable at all

Want more info? Use coupon on page 81 and you will get it!

619—Shock Absorber

A coil-spring shock absorber which assists the suspension systems of American-built cars, introduced by Accurate Products, Inc., 135 North Spring St., Indianapolis, Ind., is an oil-tem-pered overload spring which slips over the airplane-type shock absorbers and supplements the action of the coil or leaf springs which constitute the standard suspension members of the chassis.

Spring is positioned between an upper and lower mounting clamp, with both top and bottom ends being mounted in rubber so there is no metal-tometal contact. Having a load capacity of 700 lbs., support spring reportedly keeps the car level when extra weight is placed in the trunk or rear seat, and the more weight added the greater the spring action to hold the automobile level. Spring also prevents the car from

bottoming, it was claimed, increases road clearance and stops the chassis from swaying when in motion under a

Want more info? Use coupon on page 81 and you will get it!

620-Brake Bleeder

Simplified brake bleeding reportedly is now possible for servicemen with its "One-Man Brake Bleeder and Hydraulic Fluid Dispenser" announced by Badger Mfg. Corp., 1501 West Polk St., Chicago 7, Ill., which permits user to bleed and refill all four wheels without touching the brake pedal.

With the unit, brake fluid is forced under pressure directly into the master cylinder and brake fluid lines, With adapters, device will service all popular car makes and models. Fluid remains clean, being stored in a container, and there is no mess, the manufacturer said. there is no mess, the manufacturer said.

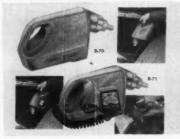
A quart-size bleeder can be used by
the individual car owner and is furnished with a choice of adapters. The
gallon-size bleeder is designed for
service station and garage use and
comes complete with three adapters.

Want more info? Use coupon on page 81 and you will get it!

621-Battery Filler, Tester

Batteries are filled automatically to the correct level with self-leveling battery fillers introduced by Ken-Tool Mfg. Co., 768 E. North St., Akron 5, O., which eliminates spills and dripping by shutting off automatically.

Valve and container are made of styrene and polyethylene. "Model B-70"



(top) is said to be ideal for dry charge batteries, while "Model B-71" (bottom) combines a filler and tester. At left, batteries are filled in a simple operation. At right, a tester, applicable for either 6- or 12-volt systems, checks the battery. Unit is supplied with extra wire and a simple clip to provide easy access in finding other car "shorts."

Want more info? Use coupon on

page 81 and you will get it!

622—Rocker Panels

Foreign car replacement rocker panels introduced by L. R. Oatey Co., 4700 West 160th Street, Cleveland 35, O., fit 1956 through 1960 Vauxhall and Envoy 4-door models, 1956 through 1958 Austin Mark I 4-door models and 1958 through 1960 Austin Mark II 4door models.

Panels may be easily cut to fit sports models of those cars, it was claimed. Sold individually—right or left—or in pairs, "Bond-Tite" foreign car panels are boxed in easily identified cartons.

Want more info? Use coupon on

page 81 and you will get it!

623—Seat Cushion

Structured to fit snugly into the bucket seat, a specially-designed con-toured ventilated seat cushion introduced by Kool Kooshion Mfg. Co., Dyersburg, Tenn., features circular coil inner construction for the seat and parallel inner structure for the back.

Seat easily snaps apart to be used separately as a cushion for ball parks



stadiums. "Kontour Kooshions" are available in blue, black, red, green or brown tweeds.

Want more info? Use coupon on page 81 and you will get it!

624—Plastic Cleaner

To restore visibility to convertible rear windows scuffed and discolored by use and weather, a plastic cleaner in-troduced by Chevrolet Motor Division of General Motors Corp., General Motors Bldg., Detroit 2, Mich., is packaged in 8-oz. squeeze bottles and is available at Chevrolet dealerships.

Based on the formula of a cleaner developed by the Air Force for cleaning the bubbles and turrets of Air Force planes, the cleaner is recom-mended especially for keeping new rear windows in good condition. Its other applications include cleaning plastic seat covers, shower doors, boat surfaces and windshields, formica table

Want more info? Use coupon on page 81 and you will get it!

625-Lamp Chart

Its 1962 automotive lamp chart announced by the Miniature Lamp Department of General Electric Co., Nela Park, Cleveland 12, O., includes identification of all makes and models of cars from 1950 to 1962 on which G-E automotive lamps can be used, a cross reference index of lamps that can be used on foreign cars, a listing of the 10 most popular foreign cars and a list-ing of all lamps used in all domestic cars plus those used in the most popular trucks.

Want more info? Use coupon on page 81 and you will get it!

626-Head Gasket

For all modern high-compression engines, the "Shim-Bestos" head gasket introduced by Felt Products Mfg. Co., 7450 N. McCormick Blvd., Skokie, Ill., is said to be thinner than a conventional "sandwich"-type gasket and only 10 to

15 thousandths thicker than a normal

'shim"-type gasket.
Its "balanced design" combines a thin steel full-face heat shield and heat conductor on one side, while on the other side a resilient layer of chemically treated asbestos reportedly provides positive sealing at both the coolant ports and the cylinder ports.

Want more info? Use coupon on

page 81 and you will get it!

627-Tire Repair Kit

No demounting of tire reportedly is necessary with "Jiffy Plug" introduced by Ace Rubber Co., P. O. Box 6147, Dallas 22, Texas, which contains 25 5/16" plugs, one 8-oz. can of cement and 3 tools.

The 100% natural rubber is said to give extra stretch, allowing an easier repair that can be made in 60 seconds. A specially formulated cement lubricates the injury and seals the mush-room head tightly against the inside of tire, it was claimed. Easy-grip handles on the probe, guide and plunger are designed to make repair easy, the manufacturer said.

Want more info? Use coupon on page 81 and you will get it!

628-Bendable Tailpipes

Bendable tailpipes introduced by O.E.M. Products Co., 5296 Northwest Highway, Chicago 30, Ill., are said to fit 85% of all cars, including new, old and foreign cars, compacts and cus-

The pipes are one-piece units in 11 of the most popular sizes. They have been tested thoroughly up to 450psi, it was claimed, and give positive leakproof protection against CO₂ fumes. Features include "hot-dipped" galyanized construction inside and outside and asbestos packing, Installation reportedly is fast, easy and economical. No special bending tools are required, since pipe may be shaped by hand, foot or knee, using the old tailpipe as a pattern. Perfect fit is assured, the manufacturer said, since minor adjustments may be made on the car.

Want more info? Use coupon on page 81 and you will get it!

629—Safety Seat Belts

Both metal-to-metal and cam-type safety seat belts have been announced by B. T. Crump Co., Inc., 5401 Staples Mill Rd., Richmond, Va.

Mill Rd., Richmond, Va.
The fully-approved belts are made in a 5-color range to harmonize with all car interiors, the manufacturer said.

Want more info? Use coupon on page 81 and you will get it!

630-Crankshaft Grinder

"Model 439 Rap-o-Matic" crankshaft grinder announced by Van Norman Machine Co., Division of Van Norman Industries, Inc., 3640 Main St., Springfield 7, Mass., reportedly combines the speed features of production grinders with the capacity to handle crankshafts up to 66" between centers (60" between chucks).

Grinder features a combination of 360° and cross slide, offset heads with fingertip crankshaft centering for faster work setup. Spring-loaded driving dogs also cut set time on crankshafts ground

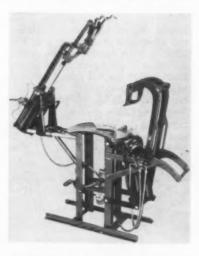
on centers, it was claimed. Headstock and tailstock with slide-type built-in outboard counterweights reportedly permit fast change-over from main to rod journal grinding. A "Vari-Drive" work head permits quicker selection of correct work speeds. The "Rap-o-Matic" has a 7" stroke with an 18" Matic" has a 7" stroke with an 18" swing and a 28" grinding wheel. Wheelhead retraction and table traverse are power-driven.

Want more info? Use coupon on page 81 and you will get it!

631-Tire Changer

An extra-heavy-duty, air-operated, non-electric automatic tire changer announced by Dynamic Center Engineering Co., Inc., Norcross, Ga., reportedly will simultaneously break upper and lower beads on the most difficult 12" to 17" tires.

Device safely removes and replaces the tire by engineered fingers activated



by industrial air cylinders, the manufacturer said. The self-centering, non-slip mechanical holddown is said to provide a means of automatically positioning the bead and rim at the bead breakers regardless of the size of the

Want more info? Use coupon on page 81 and you will get it!

632—Headlight Panels

Repair of rust-out and collision damage to headlight areas of 1957-58 Dodge, De Soto Firesweep and Chrysler Windsor models reportedly can be accomplished better and faster with headlight panels introduced by Schofield Mfg. Co., 1140 E. 222 St., Euclid 17, O. Want more info? Use coupon on

page 81 and you will get it!

633-Parts Catalog

A complete, alphabetical and numerical listing of all its 16 lines of remanu-factured parts is included in the 1962 catalog published by Kimco Auto Products, Inc., 1520 Texas St., Mem-phis 6, Tenn., which features a crossreference of manufacturers' numbers to Kimco numbers to permit quick duplication.

Want more info? Use coupon on page 81 and you will get it!



TIME SAVERS

Removing Broken Bolts From Cylinder Heads

When removing broken cylinder head bolts, I have found a method to do this without removing the head by using a 3/32 welding rod wrapped with tape to insulate all but the end.

Connect a battery jumper cable to one end of the rod and connect the other end of cable to a 12-volt battery. With another cable, ground the other battery post to the engine. Next, insert the rod into the broken bolt hole and contact the end of the broken bolt. Hold rod on bolt until they fuse. Disconnect the cables and bend the welding rod 90° on the end. Use that end to screw out the broken bolt.—Leon Nance, 907 Ken-

reed Drive, Thomasville, North Carolina.

Effecting Permanent Fix Of Ford Sway Bar

Sometimes on late-model Fords the sway bar will slip out of place when those cars have been put to very rough use.

To effect a permanent fix for this problem, obtain two tie-rod end clamps (either new or used) and clamp one on the inside of both front sway bar supports. Of course, clamps are clamped around the sway bar, thus preventing it from slipping in either direction. —James D. Martin, Service Manager, c/o Jack Hughes Motors (Ford), 100 E. San Antonio Street, San Marcos, Texas.

Preventing Fluid Loss In Automatics

To prevent loss of transmission fluid in cars equipped with automatic transmissions when the radiator is removed for repairs, do this:

Connect the two oil lines, which have been disconnected from the radiator, with a length of rubber hose 18" long, 5/16 I.D. — Robert Worley, Route 3, Box 40, Florence, Alabama.

Making Effective Repair Of Mercury Brake Knob

I HAVE a fast and inexpensive repair of the parking brake release knob on '61 Mercurys:



For 1957-61 Ford, T-Bird & Mercury

STOP POWER STEERING CYLINDER LEAKS

PERMANENTLY...EASILY

For FORD, T-BIRD, and MERCURY power steering*... here is a cylinder seal that prevents leaking for the lifetime of the car. And it's easy to install, too. You can lock the new Champ seal in place using only an Allen wrench. It's not even necessary to remove the cylinder from the car or to drain the fluid.

Sound easy? It is. Installation usually takes less than half an hour. List price of the seal kit itself is \$4.00 (\$5.00 on some models), and the regular dealer discount applies.

ASK YOUR JOBBER or write for Supplement No. 6

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First, pull shaft out a couple of inches—enough to lock a pair of vise grips on to hold it solid. Next, apply about three drops of lacquer thinner inside the knob. Wait a few seconds, then install knob onto shaft. Allow three to five minutes to set up and you'll need a team of horses to pull it off the next time.

To this day, I haven't had a repair fail to hold and the customer likes this repair much better since he doesn't have to buy a knob. —Bob Edwards, Service Manager, Sneary Motor Co. (Lincoln-Mercury-Comet), 722 Barnes, Alva, Oklahoma.

Replacing Transmissions Without Special Jack

To remove or replace a transmission when no special jack is available, a gear oil can on its own casters can be used.



Make a simple wood frame to fit the transmission and have a helper position the lube lift.—Oris Conley, Crown National Service Station, 1501 N. State Road 7, West Hollywood, Florida.

Correcting Loud Knock In 1962 T-Birds

S OMETIMES a loud knock or bumping is noticed at various speeds on 1962 Thunderbirds in the area of steering sector and floor tunnel.

We correct this by trimming off

1/4" from the left front frame brace at a point where it interferes with the left side exhaust pipe. After many hours of searching we discovered this fix, and it works. Trim brace with a cutting torch. —James D. Martin, Service Manager, c/o Jack Hughes Motors, 100 E. San Antonio Street, San Marcos, Texas.

Hutton Dies in Memphis

C. W. "Chuck" Hutton, operator of two Dodge dealerships in Memphis, Tenn., died there recently.



QUICK REMEDY FOR TUNE-UP-PHOBIA Complete PACCO tune-up kits

Every Pacco Carburetor Tune-Up Kit contains stepby-step instructions for the carburetor your customer is working on . . . plus service tips and changes, and a clear diagram of every part. He tunes carburetors expertly—and makes good money doing it.



Which means you make money, too—selling Pacco.

Moral: Prescribe Pacco complete tune-up Kits.

RECISION AUTOMOTIVE COMPONENTS COMPANY

Ballwin, Missouri



John D. Harvey Co., manufacturers' representative, has moved into this new home at Dallas, Texas. The building is situated at 3025 Main Street, about four city blocks from the former location at 2717 Commerce, from which the firm did business for eight years. The building provides 7,500 square feet of floor space for warehousing and 1,000 for offices. Distance from floor to ceilling in the warehouse is such that a mezzanine can be added for expansion. There is parking for 25 cars or trucks and an additional advantage is a block-long drive-through alongside the building.

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Rt. 1 at Rt. 128, Westwood DENVER 7, Colo., 6001 E. 38th Ave. BALTIMORE 6. Md., 7114 Commercial Ave.

Chevy's Manager Moves One Notch Higher

ORGANIZATIONAL changes recently put into effect by General Motors have resulted in the election of James E. Goodman to an executive vice presidency with jurisdiction over the automotive, body and assembly and parts divisions. Chevrolet's manager moved higher.

Goodman, who joined General Motors in 1925 as a production worker, has been a vice president since 1952 and group executive in charge of the body and assembly divisions group since 1958. He succeeds Sherrod E. Skinner, who retired Oct. 31 under provisions of the corporation's retirement program.

Edward N. Cole, who since 1956 has been a vice president of General Motors and general manager of the Chevrolet Motor Division, was elected a director and appointed group executive in charge of the car and truck divisions group. He was also made a member of the executive committee. Cole joined the organization in 1930 at the Cadillac Motor Car Division.

GM Vice President Semon E. Knudsen succeeds Cole as general manager of Chevrolet Motor Division. He had been general manager of the Pontiac Motor Division since 1956. Knudsen joined the manufacturing staff of Pontiac Motor Division in 1939.

Elliott M. Estes was elected a corporation vice president and appointed to succeed Knudsen as general manager of Pontiac Motor Division. He had been chief engineer at Pontiac since 1956 and has been associated with General Motors since 1934

Farber Brothers Names Hunt

Willard F. "Bill" Hunt has been named manager of the Trim Division of Farber Brothers, Inc., Memphis, Tenn.

Car Selling Is in Supermarket. Asserts Beacham of Ford

RETAILING of automobiles has "drifted into a super-market" and "we have got to train our people how to merchandise a supermarket."

That's the opinion expressed by a Southeasterner who, in long years with Ford Motor Co., has climbed to one of the top spots in the manufacturing of cars.



Charles R. Beacham, a native of McRae, Ga., who is Ford Motor Co.'s vice president in charge of marketing, told SOUTHERN AUTOMOTIVE Journal in an interview at Atlanta last month that the continuing decline in the over-all number of franchised dealers "will level off at the point where the manufacturers will have only enough dealers who can make money.'

An associate and admirer of the first Henry Ford, and a Southerner who enjoys the friendship of many dealers despite the fact that as a factory executive he has always carried out company policy whether it was popular or otherwise with his dealers, Beacham declared:

"We have got to find not only more ways but better

ways of doing business.

"We have got to learn better ways of building carsand more efficiently," inasmuch as competition from European manufacturers has been building up.

The former regional manager of Ford Division in the Southeast was in Atlanta to help open officially the Ford Marketing Institute, where factory representatives, car dealers and their personnel can work out answers to better serving their customers and prospects.

Courses set up at the institute will be evaluated by what the attendees do when they return home, he explained. Changes in the curricula will be made to fit best the needs of dealers, salesmen and parts and service managers, it was pointed out.

Reminded that Chevrolet had announced it was expecting its greatest sales year from the '62 models, the Georgia Tech alumnus said.

"We are setting up for a bigger share of the market than we have had since World War II."

Eight Southerners Selected For Dodge Advisory Group

EIGHT SOUTHERNERS, among 24 dealers named to the National Committee of the Dodge Dealers Advisory Conference, are:

Atlanta region-C. E. Ringer, of Ringer Motors, Inc., St. Petersburg, Fla.; Charlotte-John P. Hughes, Jr., of John P. Hughes Motor Co., Inc., Lynchburg, Va.; Dallas -John A. McKeon of McKeon Motors, Inc., El Paso, Texas; Kansas City-Jack Clark of Clark Motor Co., Inc., Oklahoma City, Okla.; Memphis-E. C. Atkinson, Jr., of Standard Motor Car Co., Inc., Baton Rouge, La., and members-at-large G. C. Dowell of Louthan-Dowell Motors, Lubbock, Texas; T. Carey Ilderton of Horace G. Ilderton, Inc., High Point, N.C., and William Massey of Massey Motors, Inc., Jacksonville, Fla.





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original fine accuracy throughout years and years of service.

K. O. Lee Company, Aberdeen, S. D.

Many Adding \$8,000-\$12,000-\$15,000 a Year Servicing Radiators!

"Our Inland radiator dept. is taking in an average of \$300 a week!"—Douthit-Carroll-San Chez Co., Memphis, Tenn.
"Grossed \$18,000 the first 9 months."—Harvey C. Jones
Co., Reseda, Calif. "Made over \$500 my first month."—
Roberts Service, Blacksburg, Va. "Taking in \$50 a
day."—Tillie's Service, Fargo, North Dakota.

Motor Service survey shows radiator repair jobs were up 15.8% last year. Profits from radiator work are

sure to steadily become even better due to increasing cooling system pressures.

FREE 48-pg. book, all about Inland equipment, easy-pay plan, free factory training school.

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Billion Dollar Increase Looms In Parts. Anderson Says

N INCREASE of more than a billion dollars in auto-A mobile replacement parts sales on a retail level within the next ten years was estimated last month by a General Motors vice president.

Joseph A. Anderson, general manager of AC Spark Plug Division, said that the promise of new and im-



He told the Northwest Automotive Wholesalers Association at Minneapolis that although "we are in an era of economy and reliability," it is evident that there will be a continued increase in the demand for those items which serve to

make driving easier and more enjoyable.

"This projected sales increase is from a figure of 586 million dollars in 1933 and will represent a solid increase over the 5.9 billion dollars in retail sales in 1960."

On the basis of replacement parts sales in dollars per car, he said that expenditures (not including tires) have increased from an average of \$16 a car in 1933 to nearly \$100. In addition, the average age of cars being scrapped in 1930 was seven years and they had been driven 41,000 miles. Within the last few years the average age has risen, he said, to slightly over 11 years with 104,000 miles per car driven.

"These figures emphasize the fact that even though cars are built better than ever-with more reliable parts and with a longer life—replacement parts sales have continued to reach new record highs," Anderson said.

During what he called the present "era of economy and reliability," Anderson said that the design objectives of the smaller cars on the market are becoming of importance equal to the full-sized cars.

"These design objectives stress the importance of economy rather than change-economy not only as related to original cost-but also economical operating costs.

"Performance now becomes important only when it can be obtained without extra fuel usage. Trim items which give an impression of luxury are used only when they don't add to cost."

Grease Institute Picks Johnson

C. L. Johnson, president of Jesco Lubricants Co., Inc., North Kansas City, Mo., was elected 29th president of the National Lubricating Grease Institute when that group met recently in Houston. Johnson previously had been secretary and vice president of the institute.

Skinner Retires at GM

Sherrod E. Skinner, 65, retired Oct. 31 as an executive vice president and a director of General Motors Corp. under the corporation's retirement program. Skinner joined GM in 1930 as chief engineer of the Ternstedt Division in Detroit.

American Motors Publishes "Rambler Family Album"

DUBLICATION of the "Rambler Family Album," a pictorial history of the automobiles produced in the 60-year history of American Motors and its predecessor companies, has been announced by American Motors

The 114-page book contains 431 photographs of Rambler, Jeffery, Nash, Hudson, LaFayette, Ajax, Essex, Terraplane and Metropolitan cars. Pictured with some of the early cars are Mark Twain, William "Buffalo Bill" Cody, Presidents William Howard Taft and Herbert Hoover, Babe Ruth, Sam Snead, Orville Wright, Eddie Rickenbacker, Amelia Earhart, Barney Oldfield, Wilbur Shaw, Clark Gable, General John J. Pershing and others.

Designed primarily for antique-car collectors and students of automotive history, the album lists names and addresses of antique car clubs, and other pertinent information. Produced by John A. Conde, American Motors' assistant director of public relations, the book is available for \$1 by writing to the company at 14250 Plymouth Road, Detroit 32, Mich.

Vented Gas Filler Cap Is "Must" for Lark Wagons

VENTED-TYPE gasoline filler cap used on the 1962 A Lark station wagon models, according to a Studebaker-Packard bulletin, must be used on that model alone and not on the other 1962 Lark models.

All other 1962 models use a sealed cap without a vent, since the gasoline tank, except on station wagons, is vented by a special pipe leading from the gas filler neck to an outlet location in the trunk floor.

It is important that the vented gas filler cap be used on the station wagon models and the sealed cap only on the other models. Poor engine performance and damage to the gas tank can result if the sealed-type cap is installed on the station wagon models, and gasoline leaks can occur if a vented cap is used on models other than station wagons.

The easiest method of identification of the two types of caps is the width of the flanged edge of the caps. The "sealed cap" has a much wider flange than the vented type used on station wagons.

Wanvig of Globe-Union **Heads Battery Group**

O. WANVIG, JR., president of Globe-Union, Inc., Milwaukee, Wis., has been elected president of the Association of American Battery Manufacturers, Inc. Other officers are F. J. Port, vice president of the Automotive Division of the Electric Storage Battery Co., Cleveland, first vice president; L. R. Hill, president of Westric Battery Co., Denver, Colo., second vice president; B. B. Steiner of Cumberland Battery Mfg. Co., Nashville, Tenn., secretary, and W. F. Price, Jr., president of Price Battery Corp., Hamburg, Pa., treasurer.

Founded in 1924, the association includes battery manufacturers, suppliers and merchandisers and acts as a clearing house for the legal collection and distribution of information on domestic and foreign battery manufacturing and distribution. In all its categories,

AABM includes almost 300 companies.



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a Low Cost Tire Changer with a BIG Bishman **AIR POWER Bead Breaker**

Bishman 'rolling action' breaker shoe powered by a full size Bishman air cylinder breaks the tightest beads on wheels 8" to 19½". Fast 'Posi-Lock' clamps wheels up to 19½" securely. Bishman double and tool mounts and dam tires easily. A complete tire changer including I qt. Rub-Er-Slide with applicator and no-drip

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Louisville, Ky.

ED PLOSS-1511 Fairmount Avenue,
Philadelphia, Pa.

FRANK LIBBY AND ASSOCIATES-2525 Tomahawk Rd., Prairie Village, Kansas

> BLUE HERON CRANE CO. 8435 Baldwin Street Oakland 21, Calif.

Car Dealers Lift Profit

WITH NEW-CAR sales anticipated by many forecasters to range in 1962 slightly above the record sales of 1955, franchised dealers reported an improved profit position for the first nine months of this calendar year, according to the National Automobile Dealers Association.

Based on member reports, NADA said:

"The automobile dealers not only held their own, but managed to improve their profit position somewhat in the third quarter. Combined operating profits at the end of nine months averaged 1.1% of sales, before federal taxes, or \$52 per new unit sold. This was an increase from .9%, or \$45 per car reported at the end of June.

"Combined selling expenses showed little change from the six months figures, but fixed expense, measured against a lower volume of sales, rose from 10.7% to 10.9%. This was more than offset by a general increase in gross profit for all except the smallest volume group. Responsible in large measure for this extra gross for the larger volume dealers was the decided improvement in their trading margins.

"Washout gross, the total gross profit from combined new- and used-car sales, averaged \$415 for every new unit sold. This compared with an average of \$399 at the end of six months, \$383 in the same nine months period last year and \$352 in all of 1960. It was substantially the best showing since the advent of the compact models, and proof that the dealers could turn in a better selling job when relieved of inventory worries.

"While the figures for the third quarter alone are not available because of accounting procedures, it can be estimated with reasonable accuracy that an average gross of close to \$450 was washed out in those three months.

"The number of dealers who showed some operating loss in the nine months averaged out to 22.5% of the total. Losses were much more prevalent among the smaller dealerships, with all makes of cars represented.

"Car absorption, the ratio of combined new- and used-car gross profit after selling expenses to fixed overhead, rose slightly to 42.6% from 42.3% at the end of June.

"A year ago at this point profits stood at 1.4% of sales, but the whole industry was bogged down with the largest stockpile of new cars in history. By year's end the dealers saw their accumulated profits dwindle to .5%, and they continued to operate at an over-all loss through the first quarter of 1961.

"In contrast, this year's experience might well serve as a lasting reminder that the period of transition to new models need not be the chaotic and costly experience for the dealers that it was last year, and has been on so many occasions in the past.

"Thanks to this year's more orderly and profitable change-over, prospects seem brighter for a strong finish in the fourth quarter."

Ford Official Predicts 6,500,000 '62 Cars

S IX and a half million units "could be viewed as a lower limit" for car sales during the coming year, according to Robert J. Eggert, Ford Division marketing research manager.

In a speech before the Kansas City chapter of the American Marketing Association, Eggert said that 7,000,-000 units is the "probable maximum level." Some of the specific factors pointing to the upturn in car sales, he said, include relatively low carryover of 1961 models, low used-car stocks and firm used-car prices.

Although he predicted a sharp upturn in the economy, Eggert pointed out that the outlook for business conditions more closely resembles the picture in 1959 than it does the 1955-57 business boom.

Pontiac Promotes Two In Engineering

J. D. DELOREAN has been elevated to chief engineer of Pontiac Motor Division and J. P. Charles has been named executive assistant chief engineer, E. M. Estes, vice president of General Motors and general manager of Pontiac, announced.

DeLorean joined Pontiac in 1956 as director of advance engineering, following eight years of service in engineering with other automobile manufacturers in the Detroit area. Charles, who had been assistant chief engineer since 1951, joined General Motors in 1926 and moved to Pontiac engineering in 1928.

Rochester Designates Lingg General Sales Manager

A PPOINTMENT of Kenneth F. Lingg to the newly-created position of general sales manager of the Rochester Products Division of General Motors has been announced by Russell F. Sanders, director of sales and engineering.

Howard Gladding, service manager, will be in charge of aftermarket sales in addition to his technical service responsibilities, Sanders said. William D. Parsons, former manager of the division's Detroit sales office, was named for the newly-created position of automotive sales manager with head-quarters in Rochester. Lingg joined the division in 1943.

WOMAN MECHANIC

Mrs. Wade Caldwell of Lincolnton, N. C., is more than an ordinary helpmate to her husband: she is a mechanic's helper, as well. He is the mechanic and she claims to be only his helper.

Her husband, however, thinks otherwise.

"She has been around automobiles so long she knows about as much about them as I do," he commented.

Mrs. Caldwell began working on cars in 1953 when her husband, who operates a garage, spent some time in a hospital and was ordered by his doctors to find some other type of work.

"He said he didn't know what else he could do," Mrs. Caldwell said. "He said he would just have to keep on being a mechanic. So I told him if he could do it, I could help him."

She does such things as install radiators, line brakes, clean or change spark plugs and set points. She also helps her husband pull motors, tear them down and then put them back together.

The lady mechanic works at the garage almost every day. Besides her work there, she keeps a neat home, grows flowers, crochets, makes bedspreads and cooks every meal that is served in their residence.

Meanwhile, the shortage of skilled mechanics continues to plague the automotive industry. That's true in the face of rapidly rising registrations and growing need for repairs.

TEN BUCKS FOR XMAS

That's what you can get from SAJ. See page 91.



You won't be satisfied using anything but original, genuine GUNK Hydro-Seal . . . see your jobber, or ask for full information.

"Dunk 'em in GUNK!"



from BOWERS of course!

There is something new under the hood - the Dry Charged Nic-I-lyte Battery by Bowers, for over 40 years a leader in the field of battery manufacturing. Nic-I-lyte is a PREMIUM QUAL-ITY battery selling at less than ordinary battery prices.* Performance-wise and profit-wise Nic-I-lyte will quickly prove its worth to you. Big 30 month guarantee -first 6 months UNCONDI-TIONALLY GUARANTEED. May we furnish you with all the good news about Nic-Ilyte? Write:

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BATTERY & SPARK PLUG CO., READING, PA.

(Div. of General Battery and Ceramic Corp.)

*Special Retail Price-\$14.95, exchange (6 volt)

Two Southerners Chosen By Chrysler President

two Southern dealers were among Two Southern dealers was selected as "Dealer Consultants to the President" by Lynn A. Townsend, president of Chrysler Corp.

Fenner Tubbs of Fenner Tubbs Co., Lubbock, Texas, was named for a two-year term, while W. W. "Bill" Massey, Sr., of Massey Motors, Inc., Jacksonville, Fla., was named for one year. Responsibilities of the dealer group will be to review periodically with the president on longrange sales and future product planning.

PLEASING VOLKS OWNERS

For years, according to Volkswagen of America, many Americans had complained that the Volkswagen, which never before had a gas gauge, was great but what it really needed was some way to tell how much gasoline was in the tank.

So, among the dozen or so improvements in the 1962 model, Volkswagen installed a gas gauge. However, this eliminated the reserve-tank valve, which, when opened by the driver, released an extra 1.3 gallons of gas-enough to go 40 miles to the nearest gas station.

Now, dealers say, some owners are bringing their 1962 Volkswagens back to have the supposedly outmoded reserve-tank valves installed at a small extra cost.

But none is asking to have the gas gauge removed, the dealers have reported.

YOUR TWO CENTS WORTH

Do you dislike redlight stops?

You should. Long studies prove it costs you two cents each time you stop your car. If you approach a redlight at 30mph and stop 40 seconds, you've blown three cents. A 60-second delay costs you four

Using the two-cent figure, if you brake for stoplights 20 times daily, to and from work, it costs you 40 cents, or \$2 for a five-day work week.

Engineers have determined that on old roads the car owner pays 11 cents per mile of travel, plus two cents for every traffic light that turns red. This includes fuel, upkeep, in-

eserve Now For A.S.I.A.



W. Heartsill Wilson (shown here), 41, resigned last month as sales promotion director of Plymouth-Valiant Division of Chrysler Corp, "for per-sonal reasons," but will remain in the automobile sales field as a consultant, working out of his home in Grosse Pointe Park, Mich. A native Grosse Pointe Park, Mich. A native Texan, Wilson was a dealership ex-ecutive in that state prior to joining Chrysler Corp. in 1953. James A. Lawson, former head of Chrysler-imperial sales promotion, has taken over Wilson's duties with Plymouth-Vallant.

surance, depreciation and lost time. But the picture is brighter on the freeways. They cost you nine cents a mile and there are no stoplights.

For example, if you travel the 30 miles on U.S. Highway 29 between Anderson to Greenville, S.C., it would cost you \$3.30 to make the trip, plus the stops. If you traveled Interstate 85 (when completed) it would cost \$2.70 and you would ride better, safer and have no redlights. The saving, of course, would be 60 cents.

Suppose your vehicle got only ten miles per gallon and you paid seven cents state tax and four cents federal tax on your gas, you would pay 33 cents in gas taxes for the trip. But, deduct that from the 60 cents you saved and you receive nearly half of it back.

Moneywise, it was claimed, the new system of freeways is worthy of the studies and research to analyze their value now and for the

And if you are interested in traffic safety, America's interstate highway system alone is expected to save 5,000 lives a year.

Remember a few years ago when the 41,000-mile superhighway system was inaugurated? Now Uncle Sam says 11,250 miles are now in use, and thousands more are a-building.

So, take your trip on a freeway and save-lives and money.

CHICAGO'S NEW DOWNTOWN MOTEL

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- Closest motel to all convention centers, commercial and shopping areas, theatres, museums, art centers, and concert halls.
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Airport limousines stop at our door.

YOUR HEADOUARTERS FOR BUSINESS AND PLEASURE

New officers of the Ford Merchandising School Alumni for 1962, elected to represent the Southeastern region, are (i. to r.): Joe Howell of Mitchell Motors, Martinsville, Va., president; Hugh C. Murrill of Bowle Motors of Monroe, Inc., Monroe, N. C., secretary; S. A. Skillman, Ford's Southeastern regional sales manager, and Bill Bruce of Bruce-Flournoy Motor Corp., Norfolk, Va., vice president. Howell, Murrill and Bruce were elected unanimously by the 140 Ford dealers who attended this year's 13th annual business conference in Boca Raton, Fla.



Commercial Credit Promotes Gibson

LIFORD L. Gibson has been promoted and transferred to the Baltimore administrative headquarters of Commercial Credit Corp. as training administrator in charge of field personnel management training courses.

Gibson, a native of Arkansas, graduated in business administration from the University of Arkansas and joined Commercial Credit in 1937 in Little Rock. Upon his return from military service in 1945, he was appointed manager of a newly-opened office in Pine Bluff, Ark., and remained there until he was transferred to Hattiesburg, Miss., in 1950. Later he was manager at New Orleans and Shreveport, La., and for the past three years held that position in Macon, Ga.

Marylanders Elect Kiefer President

JOHN G. Kiefer of City Chevrolet Co., Baltimore, was elected president of the Automobile Trade Association of Maryland when that group held its recent annual meeting.

Ridgley Waltz of Waltz & Kelly, Inc., was elected vice president and Foster W. Talbott of Talbott Motors, Inc., secretary-treasurer. New board members include Asa T. Sharp, William E. Voyce, Jr., and Gil Barrett.

J. C. "Cab" Darrell of Baltimore is the veteran manager.

Stillwater, Okla., Elects

Paul Burch of Hull Motor Co. is the new president of the Stillwater (Okla.) Automobile Dealers Association. Bob Barnes of Bob Barnes Motor Co. is first vice president and Upton Ward of Ward Buick is secretary-treasurer.

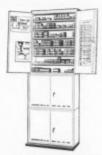


Some ignition parts deals offer "free" cabinets, but the cost of the cabinet is added to the price of the parts. But... GUARANTEED PARTS Merchandiser Cabinets are really free to dealers with the purchase of listed contents. There are no strings... no hidden costs.

There are fifteen different Merchandiser Assortments with carefully planned inventories of Point Sets, Caps, Rotors, Coils, Condensers and other ignition parts. From them, you can choose the assortment that meets your needs exactly.

GUARANTEED offers a careful inventory control program, too, so you're never out of needed parts. Get the complete story on GUARANTEED PARTS, the line that makes the word

"Quality" mean something. Ask your nearest Guaranteed Parts Distributor, or write . . .



CA-633 Merchandiser



GUARANTEED PARTS CO., INC.

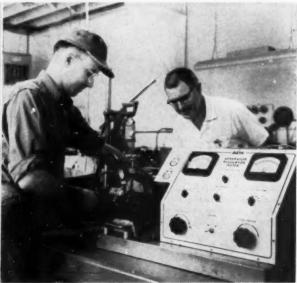
SENECA FALLS, NEW YORK



SOUTHERN JOBBERS and FACTORY MEN



Machinist Clark Copenhaven grinds a crankshaft at the machine—part of the greatly expanded shop operation.



Machinist Warren Martin tests a starter at the test bench as Vice President R. T. Clark "spectates."

Machine Shop Means "Gravy"

JOBBERS will be counting more and more on their machine shops for improvement in the profit picture.

The decline in new-car sales in recent years and increased demand for repairs on older cars have created a potential for diversified machine shop services.

Industrial users are turning to the machine shop for rebuilt engines. Heretofore engines that had to be rebuilt were bought as exchanges from motor rebuilders. In the period of the '50's jobbers were getting out of machine shop operations. With the changing demand for machine shop services today, the jobber has an excellent potential to avail himself of, with a good source of profit.

This is the view we took when we expanded our old shop of 850 square feet to 1,200 and added new equipment costing \$15,000. We believed we could increase our volume in

By R. T. CLARK

Vice President Hagerstown Auto Parts Co., Inc. Hagerstown, Md.

labor sales and hard parts and give better service to our customers. We were fortunate in having on our payroll experienced machinists who could operate the newly purchased equipment, The results have been very gratifying.

Since April '61 when our complete shop first offered expanded services, labor sales have gone up \$300 a week. The increase in hard parts sales has been at least 20%. We are now stocking oversized and undersized items which we had not handled heretofore because there was no demand. We have increased our parts stock by about \$2,000.

We know our customers are more

pleased because they have increased their business with us. Many new customers are now turning to us for machine shop services.

When we expanded, we already had space right on our own property adjoining our old operation. Formerly leased, a well-lighted building suitable for a shop was now available.

To our small shop that was already handling pinfitting, overhead valve jobs, grinding brake drums, clutch work, head grinding, piston grinding, speedometer repair, power brake rebuilding and brake lining, we added services provided by a new crankshaft grinder, hot cleaning tank, screw-in valve seat equipment, sleeve pullers and new brake drum lathe.

We prepared mimeographed flyers to notify garages, gas stations and dealerships in our trading area of



An investment of \$15,000 in new equipment to expand the shop brought a monthly gain of \$300 in labor sales. Machinist Al Newman handles brake drum lathe here.

Annua -		
BRAKE WORK Remove old lining, rivit of new (Per Shoe) Truck Sizes	.25 .45	.20
Pass Car Emergency Bands (Including Materia Truck Emergency Bands (Plus Material)	al)3.00 Hourly	2.25 Rate
Grinding Passenger Car Drums (Per Inch)	1.35	1.00
Honing Brake Cylinders Wheel Cylinders Master Cylinders	.65 1.00	.50
CAM BEARINGS - Installed (ea)	1.35	1.00
CLUTCH WORK: Check & Adjust up to 11" Remove & Install Facings	.65	.50
up to 11" Over 11"	1.00	1.00
CYLINDER WORK Head Resurfacing (Per Hole)1.00	.75

With the expansion the firm issued a shop schedule to its prospective customers, a portion of one page showing here. Shop labor rate is \$4 an hour net.

the new and complete services we were offering. We followed the first announcement with a mimeographed price list. Response was immediate and has steadily increased with time.

We found rather typical that a former average \$10.60 sale of valve job on V-8 heads, for example, had now developed to include reboring possibly, crankshaft grinding and, with the hard parts, gaskets, etc., to go with it, into a \$62.60 job. Before we expanded, this volume would have gone to someone else.

Our operation has become more attractive to salesmen. Their earnings have gone up since facilities were expanded. Receiving a commission for shopwork as well as for hard parts sales, the salesman has watched his average monthly gain exceed by \$25 to \$30 his earnings prior to our April expansion.

Arkansas Group Forms, Elects Hutton to Helm

ARANSAS joined many other Southern states recently in forming a state wholesaler association, 33 member firms out of a membership of 36 answering the roll call at the first annual convention of the Automotive Wholesalers of Arkansas.

W. P. "Pierce" Hutton of Voss-Hutton-Barbee Co., Little Rock, was elected president. Other officers are John Buecker of Stuttgart, vice president, and Ed. Smitherman of Hot Springs, secretary-treasurer. Bill Tucker of Malvern is the executive secretary.

Besides the officers, directors include C. Starbird of Fayetteville, Don Turney of Harrison and Paul Keaton of Paragould. Earl Rogers of Conway is ex-officio member.

Speakers who appeared on the program included Ray Barnett, editor of Jobber Topics; Joe Hudson of the First Pyramid Life Insurance Co. and Charles Cullen, of Charlotte, N. C., sponsored by Automotive Service Industry Association.

The banquet was attended by approximately 110 persons, including

Boosters who are in the process of forming a club in the state. Miss Gretchen Rider of Chicago, executive secretary of Automotive Booster Clubs International, was a guest of the Boosters.

McQuay-Norris Names Four

Four salesmen named by Phillip J. Costello, replacement sales manager of McQuay-Norris Mfg. Co., St. Louis, for Southern territories are: Philip J. Burke, the Carolinas; Richard W. Gilliam, Florida; C. W. "Win" Landers, Texas; and Larry L. Taylor, Tennessee.

New officers and board members of the Automotive Wholesalers of Arkansas shown here are {1. to r.}: front row, C. Starbird of Fayetteville; W. P. "Plerce" Hutton of Little Rock, president; Don Turney of Harrison; Don Dawley, Mark Hanna and Bill Tucker of Malvern, executive secretary; back row, John Buecker of Stuttgart, vice president, Earl Rogers, Paul Keaton of Paragould, Ed Bonner and Ed. Smitherman of Hot Springs, secretary-treasurer. Not shown is Earl Rogers of Conway, ex-officio member.





Some of the Combs display area and personnel are shown here (l. to r.):

Donald Warren, Jack Brown, Jimmy Holmes, James Holmes and Marjorie

Womask.

Streamlined Jobber Home

WITH the objective of providing better service for customers, Combs Automotive Supply recently opened a new and expanded home in Midland, Texas.

The building, 70' by 71', a blend of glass, Roman brick and concrete blocks on the exterior, occupies a corner lot 140' by 200' centrally located for service to the industry.

Inside, the structure is divided in half lengthwise, the front being devoted to mass displays of merchandise and the rear half being utilized as a warehouse. An exceptionally clean and fresh appearance is produced inside with white walls and acoustical ceiling, red concrete floor and white steel display islands. For

the comfort and convenience of customers, the building is air conditioned in summer and coffee is served throughout the business day.

An overhang provides protection from weather across the main front elevation and this overhang extends sufficiently at the end of the building to permit entrance of a car or truck. Here there is a drive-in window for customers who are in a hurry. They may phone their orders in advance and pick up merchandise at this window or they may make use of the firm's delivery service. Parking is provided for two dozen vehicles.

"We consider this a service organization," said Gene L. Combs, "and since our motto is, "Service As Modern As Tomorrow,' the new quarters were designed to make it possible to provide the best in service to customers."

Combs got into the automotive supply business in Big Spring, Texas, as a partner in Mead's Auto Supply, Inc., in August 1949. The firm later opened a branch in Midland and other members of the Combs family—Mrs. Combs and six children—liked Midland so well Combs decided to buy and operate the branch as his own. He took possession of the property on June 1, 1960, and about 13 months later realized his objective of more adequate facilities.

Oklahoma Group Boosts Membership to 269

TOTAL membership of the Automotive Wholesalers of Oklahoma now stands at 269.

A recent addition of 50 member firms has been announced.

Oklahomans Set March 24

Next convention and booth conference of the Automotive Wholesalers of Oklahoma will take place March 24, 1962, in the Zebra Room of the Municipal Auditorium in Oklahoma City, Executive Secretary Tom Payne announced.

Bishman Names Sam C. Brown

Sam C. Brown has been named Southeastern regional manager for Bishman Mfg. Co., Osseo, Minn., General Sales Manager D. T. Lyons announced. Brown will headquarter in Monroe, La.

Wheeler's remanufactured engines, Valvoline oils and Mansfield tires have been added to the lines of Bowman Auto Parts Co., Fort Valley, Ga., according to E. W. Bowman, Jr., owner.

Note the drive-in window and door at right for customers in a hurry at this Midland, Texas, jobbing house.





Leaders of VAWA pose after the elections held during the convention (I. to r.): seated, John F. Midyette of Richmond, retiring president; Carlton F. "Slim" Staples of Valley Distributors, Inc., Winchester, president; J. T. Sugg, Jr., of Norfolk, vice president; J. A. "Skeeter" Richardson of Richmond, reelected treasurer, and C. Mason Phillips of Waynesboro, executive secretary; back row, W. C. "Willie" McCubbins of Danville, William T. Grissom of Marion, Dock R. Ennis of Petersburg, Ray L. Brickey of Roanoke, George S. "Sam" Bailey of Charlottesville and Ramsey T. Scarborough of Newport News, directors. Director Jobe C. Tickel of Alexandria was absent when photograph was made.

Virginia Registers 523!

A WHOPPING-BIG registration of 523 gave ample proof at Roanoke last month of the strength and determination behind the creation a year ago of the Virginia Automotive Wholesalers Association.

Attendance at the first annual convention was heavily dotted with jobbers and jobber personnel, bringing happiness to the factory men who manned 100-plus exhibit booths. This was one of the highest attended, if not the highest, initial conventions of any state association in the nation. Both banquets were easily an early sell-out.

J. A. "Jack" Bryant of Bowling Green, Ky., president of Automotive Service Industry Association, told the meeting that the "evolution of distribution" was being pointed up by the continuing growth of discount houses. He asserted that the automotive aftermarket could not expect to escape all of what this means.

"Wholesalers have met many threats in the past. We shall continue to grow and prosper . . . only to the extent we are able to meet the changing times," declared the Kentuckian.

He received a standing ovation upon concluding, as did B. W. "Whit" Ruark of Chicago, former general manager of the one-time Motor and Equipment Wholesalers Association. The latter addressed the banquet under sponsorship of VAWA and not in his capacity as assistant to the president of ASIA.

James W. Heizer of Roanoke, executive secretary of the Virginia Gasoline Retailers Association and a director of the 40,000-member National Congress of Petroleum Retailers, asserted:

"We [service stations] can double our average annual \$3 billion of non-gasoline merchandise sales during the next three years. But this is true provided, and only provided, we are able to buy these products at competitive prices free from any interference or restraint from our gasoline-supplying companies as to products handled or methods of doing business."

He said "there is a shocking gap sometimes almost a chasm—between the legal rights which service station operators are supposed to have as independent businessmen under the anti-trust laws and the rights which service station operators feel free to exercise in practice."

Others appearing on the program included W. H. "Bill" Gove of Coral Gables, Fla.; humorist Edmund Harding of Washington, N.C.; Charles H. "Chuck" Davis of Chicago, executive editor of Jobber Product News, and Larry Alkire of Jobber Topics. The banquet emcee was William C. "Bill" Herbert, editor



Robert J. Jones (shown here) has been named sales representative for Service Parts Warehouse Corp., Albany, Ga., according to President Richard A. "Dick" Nix. Jones had been territory salesman for Albany Supply Co. for the past ten years.

of Southern Automotive Journal.

A plaque was presented retiring President John F. Midyette of Richmond for his spadework in helping to create VAWA. Warm praise was showered also on C. Mason Phillips, former Waynesboro jobber who is the executive secretary.

Old Dominion Automotive Booster Club B-35 was host at a social and cocktail hour.

Saunders Dies In Alabama

D. A. "Shorty" Saunders, district manager for K & W Products, Inc., died recently at his home in Cullman, Ala., following a heart attack.

David A. Taylor, formerly merchandising manager of the automotive and hardware divisions of Gates Rubber Co., has been appointed manager of advertising and sales promotion for Walker Mfg. Co., Racine, Wis. Taylor succeeds T. F. Hall, vice president of advertising and sales promotion, who retired Sept. 15 after 25 years' service.





J. E. Bickel (left), vice president of Monroe Auto Equipment Co., Monroe, Mich., is shown here receiving the "Automotive Man of the Year" award from Phil Rizzuto at the 14th annual convention of the Automotive Warehouse Distributors Association. Looking on is AWDA President Robert S. Weber of Milwaukee. Bickel received the award for his "bold ideas" in the merchandising of automotive parts on the dealer and consumer levels.

AWDA Unveils ProgramFor Jobber Information

obber Information Center," a nationwide service developed by the Automotive Warehouse Distributors Association for the benefit of automotive wholesalers, was unveiled during AWDA's 14th annual convention last month in Kansas City, Mo.

In explaining the program, Jack F. Whitaker, president of Whitaker Cable Corp., Kansas City, pointed out that wholesalers are busy selling and that J.I.C. will give them more time to keep selling by providing them answers to specific management problems.

AWDA, Whitaker said, will appoint a J.I.C. Council to consist of AWDA distributor and manufacturer members. That council will accept assignments in many areas of whole-saler management.

Manufacturer specialists in such fields as advertising and sales promotion, counter and territory sales, marketing analysis and research, inventory and obsolescence, material handling and layout, machine shop, credits and collections will direct the necessary research work required to answer wholesaler questions adequately.

Robert S. Weber of Milwaukee, reelected president of AWDA, explained that the program is doubly significant because it spells out an extension of AWDA credo to serve wholesalers and not compete with them. He said it is a new type of

service which heretofore has been unknown to wholesalers, a service which can be of vital help based on personal contact and professional consultation.

Other officers reelected are Bernard Bock of New York, first vice president; Paul R. Livoni of Los Angeles, second vice president; Harry Rothman of Oakland, Calif., secretary, and A. P. Walter of A. P. Walter Co., Chicago, treasurer. Martin Fromm is the veteran executive secretary.

Newly-elected board members are Fred D. Beecher of Philadelphia, John F. Creamer of Clifton, N.J., Frank Parker, Jr., of New York, and Edgar Rogers, Jr., of Jacksonville, Fla

Fourteen new members were added by AWDA—four distributors and ten affiliate manufacturers—bringing the association's roster near the 250 mark.

Convention speakers included Martin "Marty" Goldman, chairman, Aitkin-Kynett Co., advertising agency of Philadelphia.

Black & Decker Shifts Southern Personnel

M. D. Moders has been appointed district manager of the Miami district of Black & Decker Mfg. Co., replacing P. B. Wayman, who was transferred in a similar position at Pittsburgh.

J. R. Steffey, formerly in the Pittsburgh district, was appointed sales representative in the Dallas district, replacing B. J. Hoover, who resigned from the company. G. H.

McLain was named sales representative in the Baltimore district, increasing the company's sales force there.

Mrs. Art Ways Dies

Mrs. Arthur A. Ways, Sr., 70, wife of B-4 life member Art Ways, died recently after a long illness. She had lived in Dallas 45 years, coming from her birthplace, Houston. She is survived by her husband; two sons, Arthur A. Ways, Jr., and Charles L. Ways, both of Dallas; a brother, John H. Sonnen of Houston, and five grandchildren.

No Lift Problems Seen With Current Models

No problems are anticipated in lifting 1962-model passenger cars with current models of lifts—and that includes the three new models introduced this year, according to the Automotive Lift Institute.

The institute reported its findings as a result of liaison work with the vehicle manufacturers and actual lift tests.

The Ford Fairlane, Mercury Meteor and Chevy II, introduced this year, have unitized body constructions, front-mounted engines and conventional-type suspension systems. Other 1962 standard models and compacts are similar to 1961 models as far as lifting is concerned.

Haygood Automotive Supplies of Boaz, Ala., and Ezell Auto Parts Co. of Enterprise, Ala., have added the Ditzler paint line, it was announced.

N. Field Ozburn Dies

FIELD Ozburn, 77, chairman of the board of Parts, Inc., Memphis, Tenn., and one of the best-known "old-timers" in the aftermarket, died last month after having been in ill health since March. For years he was chairman of Ozburn-Abston & Co.

Said The Commercial Appeal editorially:

"Motoring was still a sport and the family automobile a dream of the future when N. Field Ozburn set up a Memphis business in 1911. For many years his business of supplying automobile equipment grew with the town and the rise of the automobile-truck industry. . . . His death takes from Memphis an out-

standing figure in business, in civic affairs and also in patriotic services."

Born in West Point, Miss., he was educated at St. Albans College. Upon graduation, he entered the Navy during the presidency of Theodore Roosevelt. At one time he was in charge of the U. S. naval forces on the island of Guam. During World War II he was chief of the automotive supply section of the War Production Board in Washington. He was a past president of Motor and Equipment Wholesalers Association.

Parts, Inc., is a warehouse distributor serving jobbers throughout seven states.

Jobbers Assail Competition

JOBBERS are saying that there are simply too many people out trying to get the business which the jobber wants to serve.

Warehouse distributors, redistributors, cut-raters, small operators who call themselves "jobbers" and chain store discounters are chewing away at the available business, it was charged.

Among replies to a survey mailed to 350 Southern and Southwestern wholesalers were these comments:

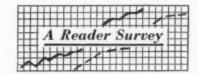
A well-known Georgian, long a leader in association affairs:

"Our sales volume this year is off from what it was the same period of last year due to many small jobbers in the area.

"The problem today is: who is a jobber and who isn't? How far will the warehouse distributors go to get business? There should be a code of ethics and a yardstick to measure up to. Soon we will all be warehouse distributors and our customers will be the large garage and service station operators. They will be the jobbers."

A Missourian whose sales were up three per cent:

"Our biggest problem is unstable prices on standard-brand parts due to warehouse distributors' selling unqualified accounts."



A small-town Texan:

"Our sales are up about two per cent. Price cutting and the big operation represented by discount houses are our biggest problems. If small jobbers stay in business, they must organize to buy like the big discount places do. We must get the buying power."

A small-city Kentuckian whose sales were down:

"I think there should be a fair trade law passed to protect small business. Discount houses, cut-rate service stations and chain stores are closing small businesses."

Sixty per cent of the respondents said their sales were above last year's performance for the same period, 30% reported a downturn and ten per cent marked up the same business.

Increases generally were below ten per cent; declines were also only a few percentage points, at best.

A well-known North Carolinian said his sales were up six per cent,

but "I believe the gross margin will be down due to price cutting."

Jobbers and warehouse distributors in the Greater Atlanta, Ga., area held a meeting last month to air distribution problems with the hope of clearing the confused picture somewhat.

A Florida Panhandle jobber said his sales were off three per cent "partially on account of the antifreeze situation."

Blackhawk Forms Two Divisions

Two integrated divisions have been set up by Blackhawk Mfg. Co., one to handle its Porto-Power line and the other its automobile and truck-lifting equipment, Vice President and General Manager Fred F. Hansen announced.

The Porto-Power Division will be directed by Manager Wesley J. Kiley, who was formerly general sales manager of Blackhawk, while the Lifting Equipment Division will be managed by Lawrence J. Lucas, former supply manager.

Tennessee Firm Hires Huffman

Lowell B. Huffman has been appointed national sales manager for Hartsville Metal Stamping Co., Inc., and its subsidiary, Southern Panel Co., both in Hartsville, Tenn., E. J. Parker, Sr., president, announced. Formerly vice president of sales for an eastern Tennessee warehouse operation, Huffman will continue to reside in Kingsport.

August Yakie Dies

August O. Yakie, 64, of Port Arthur, Texas, died recently in Galveston. He had been ill six weeks. A native of Hallettsville, he came to Port Arthur in 1920. He was president and manager of Yakie Supply Co.

Oklahoma City Store Opens

Jesse Engle has opened the Auto Parts Co. at 3836 Northwest 10th Street, Oklahoma City. Engle was formerly manager of Distributors Warehouse, Inc., of Oklahoma City.

COME DENTS WITH ME?

This sign appears in a Washington, D. C., automotive repair shop:
"May we have the next dents?"

SHOP MEN:

Try for \$10. See page 91.

"I'd also like to hear the pleasant clink of tools around here, John."





Frank G. McKenzie (fourth from left), president of Automotive Supply Co., Bluefield, W. Va., accepts the Automotive Service Industry Association "Distinguished Service Award" on behalf of his company from J. A. "Jack" Bryant, ASIA president. The Bluefield firm was cited for exemplary and enduring service since 1931. Others pictured are (l. to r.): Lawrence G. McKenzie, manager of the company's Princeton branch; J. Frank Gilbert, manager of the Pulaski, Va., branch; William A. Noble, manager of the Bluefield operation, and R. W. Johnson, manager of the Taxewell, Va., branch.



Joe L. Estes (shown here) of Winder, Ga., former manufacturer and for many years well-known in the Southeastern aftermarket, died in an automobile accident last month. He was a past president of Southeast Automotive Booster Club B-6. Atlanta.

Louisianans Told: Tests Take Cars Off Road

PROBABLY more than 5,000 cars were taken off Louisiana's roads this year because they could not meet the state's inspection requirements.

That opinion was expressed by Lieut. Ramon BonEnfant, administrator of the motor vehicle inspection section, before the eighth annual convention of the Automotive Wholesalers Association of Louisiana held recently in New Orleans.

The administrative section has been strengthened, the official said, by having additional personnel assigned and this personnel will be used to inspect each station to see that it meets the minimum requirements, those of adequate space, acceptable and approved equipment and experienced and approved personnel to make the inspections.

All officers of the association were

reelected. H. L. Hutchison of Dimmick Supply Co., Lake Charles, is president. Ed Jennings is vice president, Sid Farr of Alexandria, secretary, and Raymond Pope of Baton Rouge, treasurer. Jules L. Lamothe is the executive secretary.

Besides the officers, directors are Oscar Kagan, Stanley Massett, Martin Charbonnet, Raoul Gerac, Ed Meaux, Fred Allums, Sam Grayson, Barney Mulhearn, Glen Walker, M. J. LaBorde, L. C. Willis and Dave Wilson.

Bendix Appoints Ryman

R. L. "Ralph" Ryman has been appointed assistant manager of the Southwest district for Bendix Automotive Service with headquarters in Kansas City, Mo., Manager T. A. Kreuser announced. Ryman has been associated with Bendix for many years specializing in the distribution of brake products.

"Work Session" Panels Enlighten Alabamians

F INANCIAL and credit management panels were scheduled to instruct members of the Automotive Wholesalers Association of Alabama at a one-day mid-year workshop arranged for December 11 at the Guest House Motor Lodge in Birmingham.

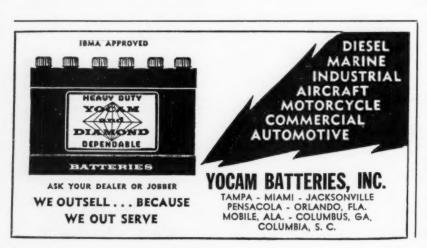
N. Jack Rhodes, a past president of AWAA and vice president of Genuine Parts Co., Birmingham, was to appear on the financial management panel, as was L. Paul Kassouf, certified public accountant, and Eugene Moor, Jr., vice president of the First National Bank of Birmingham.

Scheduled to appear on the credit management panel were George Rogers, owner of Walter S. White Auto Parts, Birmingham; George Jones, executive manager of Alabama Association of Credit Executives, and James E. Fenn, executive manager of Merchants Credit Association.

Other speakers scheduled included John W. Rooney, AWAA's executive secretary, and Dr. Benjamin Werne, Automotive Service Industry Association labor consultant from New York University.

Alabamians Select June 24-26

The annual convention of the Automotive Wholesalers Association of Alabama will be held at the luxurious Grand Hotel at Point Clear, on the southeastern lip of Mobile Bay, June 24-26, Executive Secretary John W. Rooney announced. Irvin F. Siegal of Birmingham is president of the group, whose meetings are restricted to its members.





South Carolinians Blast Premiums, Giveaways

SOUTH Carolina, first a hundred years ago in starting the shooting in the Confederate War, joined many other state associations of wholesalers last month in adopting a resolution opposing premiums and other giveaways to promote sales by aftermarket manufacturers.

The South Carolina Automotive Wholesalers Association followed the recommendation of J. A. "Jack" Bryant of Bowling Green, Ky., president of the Automotive Service Industry Association, in this action.

In one of the major addresses of SCAWA's third annual convention, Bryant asserted that because of the current "evolution in distribution," "something is going to happen to the man who can't cut down his costs of doing business." In his talk he alluded to the growing rise of discount operations in many fields.

Other speakers included W. Athell Yon of Charleston, past president of the Independent Garage Owners of South Carolina, who complimented jobbers of the state for their cooperation in aiding with the formation of IGO units and explained the many activities by IGO of SC aimed toward elevating the garageman's role in the industry; Governor Ernest F. "Fritz" Hollings of South Carolina; Dr. Charles E. Irvin, sponsored by General Motors; Ray Barnett of Chicago, editor of Jobber Topics; Charles H. "Chuck" Davis of Chicago, executive editor of Jobber Product News, and William C. "Bill" Herbert, editor of SOUTHERN AUTOMOTIVE JOURNAL.

Appearing also on the program in various capacities were Fred A. Herlihy, Sr., of Orangeburg, Cecil Morris of Greenville, J. Walter Elliott of Charleston, T. Halmon Coker Leaders of SCAWA are (I. to r.): front row, Guy M. Tarrant of Columbia, the retiring president; Ned E. Holland of Holland Auto Supply, Greenville, the new president; T. Halmon Coker of Columbia, first vice president; Aubrey Hatfield of Sumter, second vice president; Clyde Correll of Inman, secretary; H. D. Broadway of Columbia, treasurer, and Traugott Kern of Columbia, manager; back row, Bill Earley of Greer, Harold Lutz of Sumter, James Rogers, Jr., of Piedmont, W. Leon Rippy of Rock Hill, F. M. White of Dillon, Julius A. Cate of Manning, E. H. Field of Seneca, J. C. Roberts of Marion and J. Tom Hodge of Union, directors. Directors absent when photo was taken were Jimmy Hair of Columbia, W. S. Bennett of Rock Hill and Jack C. Dean of Beaufort.

of Columbia, W. Leon Rippy of Rock Hill, F. M. White of Dillon, Ned Holland of Greenville, H. D. Broadway of Columbia, J. C. Roberts of Marion and J. B. Bagwell, Jr., of Charleston.

Automotive Booster Club B-33 hosted a social hour.

Thompson Division Promotes Two

Roy Gibson, formerly manager of the St. Louis branch of the replacement division of Thompson Ramo Wooldridge, Inc., has been promoted to regional manager of eastern branches of the division.

Charles Davis, former counterman and trainee at St. Louis, succeeds Gibson there. Gibson, a native of St. Louis, joined the company in 1946. He was promoted to branch manager in 1949.

Memphis' B-25 Elects Gresham President

G. M. Gresham has been elected president of Automotive Booster Club B-25, Memphis.

Other new officers are Harry E. Godwin, first vice president; R. E. Hall, second vice president; John P. Jones, secretary, and Paul Collingsworth, treasurer.

Texans Select Corpus Christi

The annual convention and ninth annual booth conference of the Au-



Gene Paul Robers, formerly general sales manager of Thermoid Division of H. K. Porter Co., has been elected president and treasurer of Willis S. Martin Co., Inc., Fort Wayne, Ind., consultants in general marketing and public relations. The name of the corporation will be changed to Martin and Robers, Inc. Prior to joining the H. K. Porter Co., Robers was vice president—marketing of Carter Carburetor Co., St. Louis. He is a past president of the Automotive Electric Association and a director of the Automotive Service Industry Association.

tomotive Wholesalers of Texas will be held October 10-13 at Corpus Christi, Executive Director G. C. Morris announced. The recent convention, held at San Antonio, drew an attendance of 490. Sales reported at the booth conference set a new record — \$120,454 — compared with \$78,261 a year earlier at Houston.



The S. S. Arladne, sailing from Morehead City on May 4, will transport members of the North Carolina Automotive Wholesalers Association to Bermuda and return for that group's annual convention, scheduled for May 4-9. Sessions

will be hold aboard ship en route and returning from Bermuda. All jobbers and aftermarket factory men have been invited to make the cruise. Details of Tennessee jobbers' cruise to Nassau and Haiti will be given next month.

Tarheel Cruise Plans Draw Early Interest

INTEREST in the May 4-9 convention cruise by the North Carolina Automotive Wholesalers Association has begun picking up six months ahead of the sailing date from Morehead City, Executive Secretary Jesse F. Jones, Jr., announced.

This will be the group's third convention cruise and this will be a return engagement of the one to Bermuda. Business sessions, with well-known industry officials participating, will be held going and returning.

Although it will be a "resort-type" convention, Executive Secretary Jesse F. Jones, Jr., said it would be a working-convention also. Sessions will be held aboard ship en route and returning from Bermuda.

It is expected that the ship, whose cruise capacity is a little over 300 people, will be entirely filled by members of the aftermarket.

R. E. Kirkland, Jr., of Wilson is president of NCAWA.

Persons interested in the cruise

can contact the association's Raleigh headquarters at Box 8057.

ASIA "Kit" to Push Inspection Laws

A N ACTION program designed to utilize all communications media in interesting the public in motor vehicle safety inspection programs is being used by the Automotive Service Industry Association's states afety committee chairmen in 32 states which do not have periodic motor vehicle inspection programs.

The "ASIA Safety Kit," which will be used in helping to introduce and pass inspection laws in those states, contains individual state background information on safety inspection legislation and related material.

In discussing the program, ASIA Executive Vice President J. L. "Jack" Wiggins pointed out that states that do not have periodic vehicle inspection laws have more than 38% traffic fatalities per 100,000 population than do states with inspection laws. In the 18 states having



The two annual awards of Automotive Booster Club, Southwest No. 4, Dallas, were presented to Gary Askew, left, and Lee W. Boswell. For his work during the preceding year, Askew won the "Mr. B-4 of 1961" certificate. Boswell, a past president, received the facetious certificate declaring him "Mr. Behind of B-4."

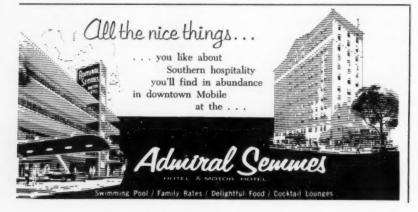
inspection, he said, up to 55% of all cars inspected were found to have mechanical faults which, if not serviced, could cause traffic accidents.

Clinton Names Georgia House

Auto-Electric of Georgia, Inc., 115 Piedmont Ave., Atlanta, Ga., has been named central warehouse distributor for Clinton Engines Corp. for that state, according to Bernard A. Noonan, Clinton vice president in charge of replacement sales.

Columbus Parts Names Oakley

E. R. Oakley of Kansas City, Kan., has been appointed territory manager for Columbus Parts Corp. in Kansas and Missouri. A native of Slaughters, Ky., Oakley worked in Kansas City as a regional manager for Permatex Co.





Leaders of FAWA include (l. to r.): seated, John Engels of Sarasota, retiring president; V. M. Dupy of Patten Sales Co., Miami, the new president; Joe N. McLandon of Tallahassee, vice president; L. A. Null of Lake City, secretary-treasurer, and H. V. "Bo" Bodine of Orlando, executive director; standing, Harvey H. Miller of Orlando, B. H. Fenn of Panama City, A. F. "Al" Powell of Fort Lauderdale and Warren A. Birt of Jacksonville, directors. Directors absent were J. H. Stewart of St. Petersburg and A. J. Turner of Arcadia.

Workshops Are Highlight Of Florida Convention

7 ORKSHOPS directed by members and broken down into small groups working through rotating appointments were a highlight of the annual convention of the Florida Automotive Wholesalers Association at the Americana Hotel at

Miami Beach Nov. 16-18.
Topics included "Sales," "Shop,"
"Financial Management," "Inventory Control," "Internal Operation" and "Credits and Collections," with table group leaders consisting of Joe N. McLendon of Tallahassee, Frank Kirby of Jacksonville, Ron Haas of Miami, Grimes Dennis of Fort Myers, V. M. Dupy of Miami, John Engels of Sarasota, Ted Arch of Coral Gables, William Olivenbaum of Orlando, A. H. "Al" Hines of Hollywood, L. A. Null of Lake City, A. F. "Al" Powell of Fort Lauderdale and W. Sargent of Melbourne.

The convention delegates voted to hold six regional business conferences over the state next year in lieu of the annual convention and then switch annual conventions to the spring, beginning with 1963.

In one of the few addresses, J. L. "Jack" Wiggins, executive vice president of Automotive Service Industry Association, pointed out:

Based on a national death rate per 100,000 population, states without motor vehicle inspection, such as Florida and the 31 others that lack it, have a 36.3% higher fatality rate than states with a statutory inspection program.

"Based on a death rate per 100,000,000 miles, states without periodic inspections have 26.5% more fatalities than states with such laws.

"Nationally, the death rate per 100,000 population killed in auto accidents is 21.2 people. Florida kills 25.2

"Nationally, the death rate per 100,000,000 miles is 5.3 people. Florida kills 5.9."

More than 100 manufacturers or their representatives manned a table conference.

Attendance totaled 455.

Mrs. R. T. Clapp, 77, Dies in Knoxville

RS. R. T. Clapp, 77, widow of the founder of R. T. Clapp Co., Knoxville, Tenn. died last month of what was believed to be a cerebral hemorrhage.

A native of Hamblen County, Mrs. Clapp was the former Kelpie Jones. Her family once owned part of the land on which American Enka Corp. now stands.

R. T. Clapp founded the automotive parts wholesaling company which bears his name in 1914. He died in 1952.

Gulf & Western Buys Patten of Miami

ULF & Western Industries, Inc., has acquired Patten Sales Co. of Miami, Fla., in a transaction involving cash and notes.

The firm operates five outlets in the Miami area and has annual sales of about \$2,700,000.

Clyde E. Hawkins, president of Patten Sales of Jacksonville, another G&W subsidiary, will supervise the Miami firm's operation.

Acquisition of Patten of Miami increases G&W's number of wholesale parts outlets to 97.





. Starts diesel and gasoline engines (from the smallest to the largest) down to 65 F. below zero . Starts in seconds . Excellent for humid weather starting too . Millions of cans sold . Publication advertising free displays and literature help presell Spray Starting Fluid for you. *The inventors of spray starting



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Members of the 32-year-old Virginias-Carolinas Automotive Wholesalers Association posed for this picture during their semi-annual convention last month at White Sulphur Springs, W. Va. R. E. "Bob" Devlin of Winston-Salem (numeral "1")

is president, W. C. "Willie" McCubbins of Danville (2) is vice president and George H. Foresman (3) of Bluefield is secretary-treasurer. Approximately 60 wholesalers are members of the group, founded in 1929, from four states.

Virginias-Carolinas **Airs Many Topics**

Many topics concerned with cur-rent problems of the aftermarket were aired at the fall convention of the Virginias-Carolinas Automotive Wholesalers Association. held for the first time in West Virginia-at The Greenbrier in White Sulphur Springs.

Topic chairmen were Ran Myers of Lynchburg, Va., John R. Flowers of Hickory, N.C., J. A. "Skeeter" Richardson of Richmond, Va., Samuel B. Stroup of Kannapolis, N. C., Grady Davis of Conway, N. C., and Frank G. McKenzie of Bluefield, W.

Two honorary members spoke-J. L. "Jack" Wiggins, executive vice president of the Automotive Service Industry Association, and William C. "Bill" Herbert, editor of SOUTHERN AUTOMOTIVE JOURNAL.

Officers will be elected at the spring convention next March, to be held at Winston-Salem or Greens-boro, N.C. R. G. "Bob" Devlin of Winston-Salem is president, W. C. "Willie" McCubbins of Danville, Va., is vice president and George H. Foresman of Bluefield, W. Va., is secretary-treasurer.

The association, whose meetings are restricted to members only, was organized in 1929.

Gulf & Western Plans Franchise Program

ULF & Western Industries' parts-G distributing subsidiary, Ameriean Parts Co., Houston, Texas, is expected to broaden its scope soon.

The annual report to stockholders stated:

"In connection with American Parts Co.'s internal development program to increase sales and im-

prove earnings, a plan is being readied to establish a franchise wholesaler program for selected independent automotive parts concerns throughout our marketing

"The basic program includes the merchandising of certain American Parts brands and can be easily expanded into new areas as additional subsidiaries are acquired. Initial research and study have proved most encouraging, and it is anticipated that a market test of the plan will take place shortly after the first of the year."

Pullman Appoints Rozgay

Matthew C. Rozgay has been appointed Midwestern representative for Pullman Vacuum Cleaner Corp. in a territory which includes Missouri and Kansas. Rozgay has traveled for 14 years in the area.

.as usual! the complete line of 1962 Models **FIBERGLASS** DUAL SYSTEMS immediate shipment! Order Today! rand AUTOMOTIVE 5310 W. 66th St. Chicago 38, III

In annual election Oct. 30, Automotive Booster Club, Southwest No. 4, Dallas, advanced four and elected one new officer. Shown here are (I. to r.): Sam McLaran, secretary; Mercer Battle, first vice president; Gene Fox, newly-elected treasurer; F. L. Wadsworth, Jr., president; Ralph E. Russell, retiring president, and Earl Beard, second vice president. Directors are Gary Askew, Richard W. Cree, William T. Lowery, Tom Rose and, according to club custom, two past presidents. These are the retiring president, Russell, who automatically became a director, and J. W. McGavock, who was elected.





Officers of Old Dominion Automotive Booster Club B-35, Richmond, Va., pose after their election during the annual convention of the Virginia Automotive Wholesalers Association at Roanoke (l. to r.): Edward S. "Eddle" Whitlock, Jr., retiring president; A. J. "Joe" Duffy, president; James E. Duffee, first vice president; Frederick L. "Fred" Carreras, second vice president; Jack Mitchell, secretary; Phil Devoto, executive secretary, and Leon F. Fertich, who is the treasurer.

Albany, Ga., Company Opens 20th Outlet

O PENING of a new outlet in Cordele, Ga., by Keenan Auto Parts Co., Albany, Ga., brings the total of stores for the Keenan group to 20, according to Executive Vice President Howard Hout.

J. C. Settles, formerly a salesman for Keenan Auto Parts Co. of Tallahassee, Fla., is manager of the Cor-



J. C. Settles

dele store. Glynn Goings, who covered the territory for Keenan Auto-Parts Co. of Marianna, Fla., is assistant manager, and Phil Bates of Cordele is counter trainee.

A branch store has been opened at 107 S. Harding St. in Albany and Denver Rikard, longtime counterman at the main store and warehouse in Albany, is in charge of the branch.

Moog chassis parts and Monroe shocks have been added by Al Jones & Son, Tampa, Fla., according to Al Jones, Sr., senior partner.

Lee Motor Products Buys At West Palm Beach

LEE Motor Products, Inc., Cleveland, has acquired for an undisclosed amount of cash Atlantic Warehouse, Inc., West Palm Beach, Fla., in its second expansion into the Southeastern market, President Ronald Kumin announced.

The Cleveland firm recently acquired Miami Parts & Spring, Inc., Miami. George DeWitt will continue as general manager of the West Palm Beach firm, whose operations will be expanded in Florida, Kumin said.

Mobile, Ala., Company Adds Another Branch

Moror Parts & Supply Co., Inc., Mobile, Ala., has opened an additional branch store at 707 Holcombe Ave. in the loop area of Mobile, according to President Lyman O. Weaver.

Cliff Faggard transferred from the company's Grant Street branch as manager of the new store, leaving Carl Williams as manager at Grant Street. The new branch features a drive-in window — Mobile's first, Weaver said. A machine shop will be added there shortly, he said.

If You Select Site, Watch the Zoning

O NE Virginia wholesaler learned too late that the location he had chosen for his branch was not zoned for wholesaling. He had to move out the merchandise at the last minute!

It's a simple matter to ascertain from the local authorities if the

building you plan to use is in an area permitting wholesale operations.

Owatonna Appoints Richmond

Appointment of Otto L. Hughes, Jr., as district manager for Owatonna Tool Co., Owatonna, Minn., in Louisiana and northeastern Texas has been announced by Sales Manager S. L. Richmond. Hughes will reside in Alexandria, La.

Moon Joins Georgia Operation

M. C. Moon has replaced F. B. Walker as sales manager for Bowman Auto Parts Co., Fort Valley, Ga., owner E. W. Bowman, Jr., announced. Moon was formerly associated with Brooks Auto Parts Co., Perry, Ga.

Tennessean Opens Fourth Unit

Service Auto Parts Co., Inc., Knoxville, Tenn., has opened a branch store in Middlesboro, Ky., President Hamilton S. Burnett, Jr., announced. The new store is the fourth branch the company has opened in as many years.







Keenan Auto Parts Co. has just opened this branch in its headquarters city of Albany, Ga. Shown inside the branch are (I. to r.): Paul A. Keenan, Paul A. Keenan, Jr., and Howard Hout, who is executive vice president. Denver Rikard is the manager.

Gulf & Western Earnings Show 29% Increase

Ner earnings after taxes for Gulf & Western Industries, Inc., amounted to \$1,000,000 this year compared with \$706,000 in 1960, rising 29% to \$1.10 per share from 85¢ a share for the previous year.

Sales for the same period, according to the company's annual report to its stockholders, increased 17%, amounting to \$33,800,000, compared

with \$28,000,000 in 1960.

Charles G. Bluhdorn, chairman of the board, explained that while total sales volume during the past year had reached a record high, the current sales rate is such that annual sales for the 1962 fiscal year should exceed \$50,000,000. The company plans to continue its expansion program in the automotive parts distribution field, which added 54 outlets during the last 12 months, bringing the company's total whole-

sale parts outlets to 92.

Since the company launched its expansion program in December 1957, it has grown from a single-product company with a net worth of \$2,300,000 to a distributing and manufacturing organization which, as of July 31, 1961, had a net worth of \$10,400,000.

Lee Motor Products Names Schmeling

WILLIAM Schmeling has been elected vice president of Lee Motor Products, Inc., Cleveland, President Ronald Kumin said.

Schmeling, who has been vice president and general manager of Miami Parts and Spring, Inc., a wholly-owned subsidiary of Lee, will headquarter in Miami and will continue to be in charge of operations for the Miami firm.

Krylon Appoints Butz

Sidney Butz & Associates, Inc., 416 Providence Road, Charlotte, N. C., has been named representative for Krylon, Inc., Norristown, Pa., in Virginia, Georgia, the Carolinas, Tennessee, Mississippi, Alabama and Florida.

MANUFACTURERS' AGENTS REPRESENTING OUR ADVERTISERS

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W. P. Piperburg—Birmingham Lee Filter Company

FLORIDA

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J. H. Jones—Jacksonville (B) Bishman Mfg. Co. Homestead Valve Mfg. Co.

T. H. Shealy—Tampa (AAR) (B) Laher Spring & Tire Corp.

GEORGIA

Aaron & Bell—Atlanta (AAR) (B)
Monroe Auto Equipment Co.

Clark-Richards Co.—Atlanta (AAR) (B) Shurhit Products Co. Clarence Ethier—Atlanta (B) Homestead Valve Mfg. Co.

Gene Fike—Atlanta (AAR) (B))
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J. L. Mattie—Atlanta (B) Otto-Items, Inc.

W. L. Morris—Atlanta (B) Spray Products Corp.

N. A. Williams—Atlanta (AAR) (B)
Blackhawk Hand Tools
Ken Tool Mfg. Co.

Edward Zinnell—Atlanta (B) Lee Filter Corp.

F. H. Williams Co.—Covington (AAR) (B) Acme Air Appliance Co., Inc. Monkey Grip Sales Co.

The Bob Black Co.—Decatur Laher Spring & Tire Corp.

KANSAS

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KENTUCKY

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(B)
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LOUISIANA

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MARYLAND

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Herman A. Shields—Meridian (AAR) (B)
Precision Automotive Components Co.

MISSOURI

R. S. Black—Kansas City (B) Lee Filter Corp.

C. N. Buettner—Kansas City (B)
Acme Air Appliance Co., Inc.
Monkey Grip Sales Co.
Precision Automotive Components Co.

Herb Calkins, Inc.—Kansas City (B) Grand Automotive Products

G. D. Heath Co.—Kansas City (AAR) (B) John E. Mitchell Co. Spray Products

Charles H. Koslowsky—Kansas City (AAR) (B) Bishman Mfg. Co.

Mosher-Williams, Inc.—Kansas City (AAB) (B) Fulton Sylphon Div.

M. H. Swanman, Inc.—Kansas City (AAR) Champ-Items, Inc.

J. F. Tapp Co.—Kansas City Blackhawk Hand Tools

Don Ayd—St. Louis (AAR) (B) Bishman Mfg. Co.

Russ Nixon—St. Louis (AAR) (B)
Guaranteed Parts Co.
Gunk Laboratories, Inc.

Walter G. Punt-St. Louis (AAR) (B) Otto-Items, Inc.

NORTH CAROLINA

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Fulton Sylphon Div.

John Cain—Charlotte (B) Spray Products Corp.

Walden & Ward—Charlotte (AAR) (B)
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Otto-Items, Inc.

A. W. Mansfield—Greensboro Storm Vulcan, Inc.

Ruark & Co.—High Point (B)

Precision Automotive Components Co.

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B. A. Kline-Oklahoma City (B) Bishman Mfg. Co.

Henry Lees & Associates—Oklahoma City
(B)
Grand Automotive Prod.

Jim Permenter—Tulsa Spray Products

PENNSYLVANIA

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B. B. Burk—Dallas (AAR) (B)

Monroe Auto Equipment Co.

Caphton & McEvoy Co.—Dallas (AAR)
(B)
Precision Automotive Components Co.

S. J. Cole—Dallas
Southern Friction Materials Co.

J. S. Connell Co.—Dallas (B)
Manley Valve Corp.

H. M. Cree Co.—Dallas (AAR) (B) Fulton Sylphon Div.

Crockett-Jordan-Duncan Co.—Dallas (B)
Spray Prod. Corp.

Hirsig-Frazier Co.—Dallas (AAR) (B) Gunk Laboratories, Inc.

W. F. Janowski-Dallas Storm-Vulcan, Inc.

Albert Jayne—Dallas (B) Ken Tool Mfg. Co.

McClintock Sales Corp.—Dallas (AAR)
(B)
Acme Air Appliance Co., Inc.

Philip T. Miner—Dallas
Homestead Valve Mfg. Co.

J. J. O'Connell, Jr.—Dallas (B)
Otto-Items. Inc.

Vogel-Swygard Associates—Dallas (B) Bishman Mfg. Co.

Bradley Wayne—Dallas Lee Filter Corp.

O. C. Zell—Dallas (B) Storm-Vulcan, Inc.

Keiler-Hyden, Inc.—Ft. Worth (AAB) (B) Champ-Items, Inc. John E. Mitchell Co.

Jack Anderson Sales Co.—Houston Homestead Valve Mfg. Co.

Wm. A. Kail Co.—Houston

Bacharach Industrial Instrument Co.

VIRGINIA

T. S. Armistead—Richmond (B) Homestead Valve Mfg. Co.

Chaney & Co.—Richmond (AAR) (B) Bishman Mig. Co.

WEST VIRGINIA

George M. Scott—Charleston Bishman Mfg. Co.

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TOUGH

on oil pumping

GENTLE

on Cylinder Walls



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There is a difference in modern, self-expanding oil rings—especially the Ramco C-9.

The difference we show here is the backbone construction of the C-9—and how its activating shoulders give your rings side of groove sealing.

You've seen how it works. The C-9 won't let oil get from behind the ring because the shoulders are slightly angled. This angle—precisely engineered—gently presses the rail against the side of the groove, both top and bottom—and won't let oil pass. This adds to the ring's effectiveness in stopping oil pumping.

Next time you install a Ramco C-9, look for this difference. Feel the shoulders, note the strength. And after you've installed it, note the effectiveness. It works.

backbone difference



Side of groove sealing is only one of the many differences the Ramco backbone brings you. They are all described in our folder: "BACKBONE FACTS." See your Ramco Jobber, or write for your free copy:

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RAMCO MODERN POWER
PISTON RINGS

